SEQUENCE LISTING

- <110> Yen-Potin, Frances
 Denison, Blake
 Bour, Barbara
 Bihain, Bernard
 Dumas Milne Edwards, Jean-Baptiste
 Duclert, Aymeric
 Bougueleret, Lydie
- <120> APOLIPOPROTEIN A-IV-RELATED PROTEIN: POLYPEPTIDE, POLYNUCLEOTIDE SEQUENCES AND BIALLELIC MARKERS THEREOF.
- <130> GENSET.50CP2C
- <141> 2000-06-22
- <150> US 09/599,362
- <151> 2000-06-21
- <150> PCT/IB99/02058
- <151> 1999-12-20
- <150> US 09/469/099
- <151> 1999-12-21
- <150> US 60/113,686
- <151> 1998-12-22
- <150> US 60/141,032
- <151> 1999-06-25
- <160> 6
- <170> Patent.pm
- <210> 1
- <211> 81001
- <212> DNA
- <213> Homo sapiens
- <220>
- <221> misc_feature
- <222> 10946..12946
- <223> 5'regulatory region
- <220>
- <221> exon
- <222> 12947..12958
- <223> exon 1
- <220>
- <221> exon
- <222> 13470..13526
- <223> exon 2

```
<220>
<221> exon
<222> 13641..13752
<223> exon 3
<220>
<221> exon
<222> 14271..15968
<223> exon 4
<220>
<221> misc_feature
\langle 222 \rangle 1596\overline{9}...17969
<223> 3'regulatory region
<220>
<221> allele
<222> 1239
<223> 20-828-311 : polymorphic base C or T
<220>
<221> allele
<222> 12347
                  : polymorphic base C or T
<223> 17-42-319
<220>
<221> allele
<222> 15241
<223> 17-41-250 : polymorphic base C or T
<220>
 <221> allele
 <222> 42218
 <223> 20-841-149 : polymorphic base A or G
 <220>
 <221> allele
 <222> 45442
 <223> 20-842-115 : polymorphic base A or G
 <220>
 <221> allele
 <222> 77058
 <223> 20-853-415 : polymorphic base C or T
 <220>
 <221> primer_bind
 <222> 929..949
 <223> 20-828.pu
 <220>
 <221> primer_bind
 <222> 1357..1377
 <223> 20-828.rp complement
 <220>
```

```
<221> primer bind
<222> 12029...12050
<223> 17-42.pu
<220>
<221> primer bind
<222> 12581...12603
<223> 17-42.rp
                  complement
<220>
<221> primer_bind
<222> 14992..15012
<223> 17-41.pu
<220>
<221> primer_bind
<222> 15460..15482
<223> 17-41.rp
                 complement
<220>
<221> primer_bind
<222> 42070..42090
<223> 20-841.pu
<220>
<221> primer_bind
<222> 42572..42591
<223> 20-841.rp complement
<220>
<221> primer bind
<222> 45328..45347
<223> 20-842.pu
<220>
<221> primer_bind
 <222> 45863..45883
 <223> 20-842.rp complement
 <220>
 <221> primer_bind
 <222> 76644..76664
 <223> 20-853.pu
 <220>
 <221> primer_bind
 <222> 77166..77185
 <223> 20-853.rp complement
 <220>
 <221> primer_bind
 <222> 1220..1238
 <223> 20-828-311.mis
 <220>
 <221> primer bind
```

<222> 1240..1258

<223> 20-828-311.mis	complement
<220> <221> primer_bind <222> 1232812346 <223> 17-42-319.mis	
<220> <221> primer_bind <222> 1234812366 <223> 17-42-319.mis	complement
<220> <221> primer_bind <222> 1522215240 <223> 17-41-250.mis	
<220> <221> primer_bind <222> 1524215260 <223> 17-41-250.mis	complement
<220> <221> primer_bind <222> 4219942217 <223> 20-841-149.mis	
<220> <221> primer_bind <222> 4221942237 <223> 20-841-149.mis	complement
<220> <221> primer_bind <222> 4542345441 <223> 20-842-115.mis	
<220> <221> primer_bind <222> 4544345461 <223> 20-842-115.mis	complement
<220> <221> primer_bind <222> 7703977057 <223> 20-853-415.mis	
<220> <221> primer_bind <222> 7705977077 <223> 20-853-415.mis	complement
<220> <221> misc_binding <222> 12271251 <223> 20-828-311.probe	

```
<220>
<221> misc binding
<222> 12335..12359
<223> 17-42-319.probe
<220>
<221> misc binding
<222> 15229..15253
<223> 17-41-250.probe
<220>
<221> misc binding
<222> 42206..42230
<223> 20-841-149.probe
<220>
<221> misc binding
<222> 45430..45454
<223> 20-842-115.probe
<220>
<221> misc binding
<222> 77046..77070
<223> 20-853-415.probe
<400> 1
cetectgata tgacateatg tgaacttete actteacett taagtattet tageeaggea
                                                                    60
                                                                   120
cagtggcaca tgcttgaaat cccagcactt tgggaggctg aggcaggggg atcgcttgag
gccaggattt caagaccagc ctgagcaaca tgtcaagacc cccacctcta caaaaaatta
                                                                   180
aaaagttagc caggtgtggt ggtcatgcct gtagccccag ctacttagga ggctgaggtg
                                                                   240
 ggaggatcac ttgagcccag gagtttgagg ctgcagtgag ctatgatcac accactgcac
                                                                    300
 360
 aaaaaacccc acagtaaatt agaagaaagc tgcataaatt agaagaagct gatgtgaaat
                                                                    420
 cctgagtcca tggttcaatt taggagggac catctggaga gcagggaacc cccaaaagtc
                                                                    480
 agtttcttta ggcttatttc cttgggccag ccaaatttct cagggagaat gttgttccat
                                                                    540
 tttcaatatg gggaaagatg gtgaactgag gagtctttta aaaaaattta tttttgagat
                                                                    600
 ggggtctcat tctgtcgccc aggctagaga gcagtagcat gatcatggct cactgcggtc
                                                                    660
 tctaactcgt gggctcaagt aatccttctg cctcagcctc ctgagtagct aggaccacag
                                                                    720
 gtgccaccat acctggctaa tttttgtatt ctttgcagag acagggtctc gctacattgc
                                                                    780
 840
 tgggattaca ggcatgagcc actgtgccca gcctcaaaat ttaatgtata aagttttcct
                                                                    900
 taatttttct tagcacaaaa accetggeee ecaacaatae etagttttet ecaggeegga
                                                                    960
 gtcccactct tttacccttt tcagagagaa taagcatctg gttttctgct gctttggggg
                                                                   1020
 tacccagcca agtagagttg aagagaacag ctgcttctca aacagactct cgaccaactg
                                                                   1080
 ccatatttct agtcccactg ccacccactc ttccagaaga atgttgacac taatgtcaga
                                                                   1140
 gcatttggag agtttagtag tgaaaatcag gggccttctt ggctttctcc actgctgctt
                                                                   1200
 caaaattcat gtcaggtgtg cctgtcacca ccgtttgayc atttggaagc tttccagctt
                                                                   1260
 cccaaatgtt gttatttttg tctccttttc tattttccct ttgggtttat gcattttgta
                                                                   1320
 aaaagtgcac ttcaatgcca cgttattgag atttcagaga acagcagagg ctaatgcatg
                                                                   1380
 caattaatcc accgtccgtt actagaagtc aatcggatgc tctttagtct ctcttcccca
                                                                   1440
 tatactagtt taaaagttat ccattctttc tattcgtttt atgggttatc cttaaaattt
                                                                   1500
 taatattott gtotgacota acaaagtota tagataatoa atatoootat otttotooog
                                                                   1560
 aataatgcaa aggetgetga atgettteae tttgatetet cettteecat ttecaggttg
                                                                   1620
 cttcggtctg atattttagt tcctcattac ttttaacacc tcctccaaag tagtcccttc
                                                                   1680
 atcaatagat gtttttgage cetecetace atgtgataag cactggteta ggcactggga
                                                                   1740
  gtacagtagg aaatgagata aacttggcca ggtgtagggt ggcttacacc tgtaatccca
                                                                   1800
  acacttttga ggccgaggcg ggcagctcgc ttgagcccat gagttcgaga ccagcctggg
                                                                    1860
```

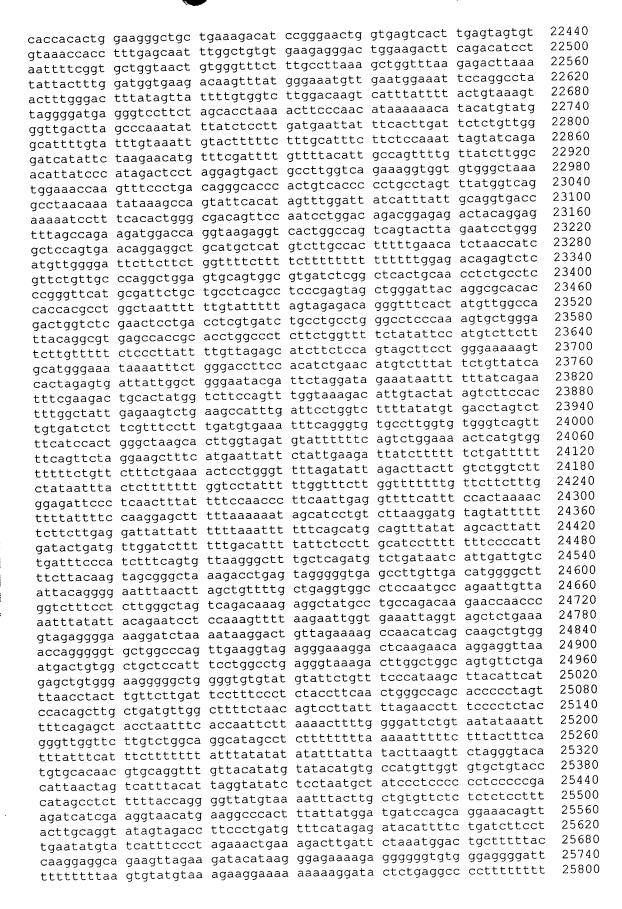
					astaataata	1920
aaacatagcg	agacccccgt	ccctacaaaa	aaatataaaa	accagaigg	acccanat	1980
tatgcctgtg	gtcctagcta	ctcagaagac	tgaggtggga	ggattatttg	ageccaggge	2040
ggtcgaggct	gcagtgatta	caccactgca	ctccatcctg	ggcaacggcg	atatataaat	2100
tcaaaaaaca	aacaaacaaa	caagcaaaca	aaacccccac	tanaganattt	ttantnaaaa	2160
acatttttgt	taggtagaac	tatatgaaat	tgccactatt	tgaccaatt	tacctaaacc	2220
ctagtctcat	aagtgtgtgt	gtgtgtattt	tcactaatgt	tttttggatt	ctacctadate	2280
tttactaatt	tcattgctcc	ccatgtctcc	ttctatccta	ttccttttt	tagageeeeg	2340
tttccttttc	agatttttag	tagttctttt	cagtgaggat	ctgtgagtgg	atattaatta	2400
ttctctgaaa	ttaacttctt	cctctcaaat	aatagttcac	ctgagtataa	taccasttta	2460
accattaatt	teettteagt	ctttagaagg	tacattgatg	ataaattagt	tyccygttta	2520
atcatacttc	atatatagat	cattagtctt	tctctttggt	igalillaay	atatecateg	2580
ccttcaatat	totacagatt	cctataatat	qtcctcattt	ggttgtgtgt	Laattittee	2640
taccaagact	caggatgctt	cctgtacctg	aggattccgg	tcacatcttg	ctcdatgtt	2700
tgaaatttct	cagccatcat	cttttgaata	ttgcctcttc	cacagtccct	gigiliciti	2760
catagaaatc	ctacaggcat	atattqqacc	teceattetg	tectecatge	Cicilacigi	2820
atattaatac	cctccttttt	atatttaatt	tttttqaqac	agagttttgc	Largragace	2880
aggaggagt	gcaattgcat	gatettaget	cacqqcaaac	tetgeeteee	aggillaage	2940
+attctccta	cctcagtctc	ccaaqtaqct	gggattacag	gcalgcacca	ccacgcccgg	3000
at a at t t t t a	tattttaat	agagacggg	tttcaccata	ttggccaggc	Lygicigada	3060
ctcctgacct	caggtgatcc	acccacctcq	qcctcccaaa	gtgctgggat	Lataggeatg	3120
agccaccatg	cctggccaat	atcacccqcc	tcggcctccc	aaagtgetgg	gattacagge	3180
ataaaccacc	atacctaatc	aatatcctcc	tttttatttc	tgtgattcii	tetgtgtgat	3240
tttctcagat	ctaccttcta	gcttactaat	tctctctcca	actgtagcta	aargryrtii	3300
atattataat	gactatattt	ttttcactta	tagatgttct	atttaattct	CLLECTICE	3360
ancanatara	acttatttca	aaacaaacaa	aaggccaggc	atggtggttc	acyccigiaa	3420
tecesatact	ttaagaagat	gaggcaggag	gattqcttga	gcccaggagu	ccaaggccag	3480
cctagacaac	· atagtgagat	cctttctcta	ccaaaaaaat	aaaaaatcay	cigggiging	3540
tagaacactc	ctataateee	agaaactaca	gattcttggg	aggcagaggc	Lygayyaccy	3600
attanaacac	, addctddadd	attacttaaa	cctqqqaqqt	tgaggctgca	gigaacigig	3660
atcatoccac	tacactictad	cctagataac	aaagtgagat	cctgtctcaa	adacadacad	3720
2022202200	· aaadaaacaa	aaaaatgctt	acacaggtta	Ctactttct	gergggarag	3780
++++ > > < > < t	· acattaaaca	- taaacacctt	tctttctgaa	atgtattiga	galylacacc	3840
~~+++++	2220002000	· ctccattaaq	atctqqtqat	agcagtagaa	acaacycaga	3900
ataactccac	- aatcatatac	ı atattttaq	i tqcqttctga	galggagicc	. aggaacacca	3960
agtaaagact	getaceteac	: agtttacatc	: tgagttctta	. gaagacaaya	Cigaaggaga	4020
acaatttgta	a acaagattta	cttggcccgg	, gtgtggtggc	: tcacacctgt	aatcccagta	4020
ctttgggag	c tttgggagto	: cgaggtgggt	ggatcacctg	aggtcaggag	ttcaagacca	4140
gcctggccaa	a catggaataa	a cccccatctc	: tactaaaaat	. acaaaaatta	gccaggcacg	4200
gtggcacac	g cctgtaatco	c cagctactca	ggaggetgag	gcaggagaat	cgcttgaacc	4260
caagtgact	g ggttgccgag	g agccgagato	acgccactgt	actccagcca	a ccctgggtga	4320
cagagtgag	a ctctdccaaa	a aaaaaaaaa	a aaaaaaaaaa	l aalacttact	, gillayaagg	4380
agaagtcata	a atgttgcttt	aaagaacag	y tcacaaaaga	a aagactclag	g aagatettet	4440
cacttggtg	c atatcaagto	g tctatttgag	g acccatacac	ttgcttaat	catgtgttta	4500
aggcaaaag	t gctgctgctg	g agcagtaagg	g aataaggtad	ctgctaacci	ttaccaatct	4560
acattttaa	a atccttctta	a ctacacatco	c agaatgagto	agcaattet	gtgtattaaa	4620
22222222	c acaaaacaa	a atagaggg	c aactctctta	a adaatycay	Laccegedada	4680
anatatant	2 022220020	a dtcaaddaaa	a gggcagcaca	a addadyttic	a cctggaagga	4740
a + a + a + + a a	a agtetetag	a tttaagaaca	a agttccctaa	a aagciciia	Liacayaaya	4800
+aaa-+-	n tabatataa	c tagaatgate	a daattetttä	a aqtiticat	L LLGLLLLGGG	4860
and at at at	a accesaget	a dadtacadti	n acttaatca	c ggclcacly	agecteaace	4920
taccadact	c tagtastcc	t cccacctca	g cctcctgag	t ggctgggac	L acaaycatyt	4920
ataccacca	t getaggeta	a tttttqtat	t ttatttta	g tttttttill		5040
+++++ at 2 a	a dacaddtt	t accatatta	c caaqqctqq	t ctcaaattc	c tgggttcaay	5100
+ + +	a statesacc	t tccaaagag	c taggattac	a qqcatqaqc	t actgcaccig	5160
acatacaat	t ttttaaaaa	t cactatetq	g caactctca	g galaalall	c gatteagged	5220
aggateate	a atdaatdct	a aaaccattq	g gtgaaaaat	t gttycayaa	i gggaigeica	5280
catggcttc	a aagtattgc	t ccacaaatt	a cttatcaat	a acgraaaaa	a ccaaacttta	5200

5340 ctagccatgg agaaatctgg ttgttatcac tttaatggag tgatcaaact taacatcact 5400 aaatagagtg caacctccag ctaggataca gtaagaaggg ccagatatca cctagtattt ttgccaaaaa tgtttaacct taatctaatc atgagaaagt aatcactcaa atccagaatg 5460 5520 tgggacattt tacaagatgt cctccttgca ctcttccaaa aaaaaatcaa tgtcatgaaa 5580 acaaacaaat ggtggggttg gggagaacgg ttctaaattt aaaaactaaa gtgggataac aaccagatga gatgtgttag agcttgaatt tacagagaga gaaaaacaac tatgaaagca 5640 ttttggggaa aatctgaata tgtaggatat gttagatgat attaaggaat tgtgttaatt 5700 5760 ttcaaaggta tgataatgtt tttttctttt gtaaaagagt ccttattttt cacaatgtat gttgaagtat tcagagtgaa gtgtcatgtt ggctataatt atttcaaatg gttccacaca 5820 caaagcacat accacataca catatacata tacctccaac caactcaaaa catgttcaac 5880 actgaaacta taagatgcca ccaaacaggg aagcatgagt gtgtgttgca tctacccatt 5940 gtatcaatcc aggttcagtc agaaaaacaa aagccattcc acgtatttca agcatgaaag 6000 gctttaaaac aaaaaattaa aggtttatcc aactcttgga agggctggag gagtgaccac 6060 cttggtttgc agttcagaag gagtgactct caaacgctca ttagtaagtg gctacaaatg 6120 ggaagctcgc cttattatgc ctgcaatatc aatgcatgtg attcctggga aggtcaccca 6180 gaagetgett taaacteeaa geetgteeat gettetgtet geaaceggea ttgaaacata 6240 atggcctctc ctcttccgtc tcacgctggc tgactctaac ctaggctcat atagagaagg 6300 gattctagaa aatgtattaa tagttccaag tgtcccctct gcatctcata aaagacctta 6360 gaaagggcac tgataatgct atttgcaaaa agacaatcca gcgcagttgt attttacagc 6420 acaggctctt taagtttggg ttatcagcaa aaaaccatta gagtatgaga aattcctttt 6480 taaattgtgg caaaatatac ataacataaa aattaccatt gtagctattg tacattgtag 6540 ctaagtatat agcccagtag cactaaatac atttacactg ttgtgcacca ctatctagct 6600 ccagaaactt ttaatcttcc caaacagaaa cttgtaccta ttaaccaata ccttctcctt 6660 cctcacttct cctagaaacc agaattatac tttctgtctc tacaaatctg actattctgg 6720 atacctcaga atcacagtat gtgtcgttct acgactggct tgtttcactt agcatcatgt 6780 6840 ttttttttt gagacacagt ctcgctctgt cacccaggct ggagggcagt agcacaatct 6900 cagttcactg cagcetetge ettecaggtt caagcaatte tegtgeetea geeteceaag 6960 tagctggaat gacaggcatg caccaccaca cctggctaat ttttgtattt ttagtagaga 7020 7080 cggggtttta ccatattggc caggctggtc ttgcacttcc ggcctcaagt gatctgcccg teteggeete ecaaagtget gggattacag gegtgageea etatgeetgg eeceegattg 7140 7200 tcattattta aggctaagtg atattttgtt gtctgtatat accacaattt gtttattcat tcatctgtca atggacattt gggttgtttc caccccctgg ttattgtgga taatactact 7260 aggaacacga gcatacaaat atctgctcca gtccctgctt ttatcttttg gatatatgcc 7320 7380 cagaggtgga attgctgggt cataaggtaa ttctagatta aattttttga gggactgccg tattgttctc caccatagct gcaccatttt acctttccag cagcagcgta caagcggtcc 7440 7500 agetteteca catetteace caeacttget atttttgget tttattttat tttttaaaat 7560 aacattctaa tgggtgttaa gtggtcagaa atggttcttt taggagtaga gatagaggcc 7620 agggggatgg ctcacacctg taatcccagc actttgggag gcctaggtgg gcggatcact tggggtcagg agtttgagat cagcctggcc aacatggtga aactccatct ctattaaaaa 7680 tacaaaaatt cgctgggtgt ggtggtgtgc actcccagct acttgggagg ctgagggaag 7740 7800 agaatcgctt gaacccggga ggcggtagtt gcagtgagcc gagatcacac cactgtatgg 7860 gaaaagcatt gaaaacacag cctcagctca gctcagtctg ccatggtggg aagccattaa 7920 ttcttcactc ttgaaacctt ttcgtccttg gtgtggcaga ggctgcaagt ctcctctgca 7980 8040 actttattct tcccttcttt ctcagttata aaatccctga ttttagaaat atctttattg agatataatt cacataccat aacattcact acaattgaat ggtttttagt atattcacag 8100 atttgtacaa ctatcaccac aaactaagtt tagaactttt ttcatcatcc cacaaagaaa 8160 ccccacaccc attagcagtt attcactatt tctccccaat caacctcccc tcccctcaat 8220 agccctaggc agccaccagt ctactttctg tctctaccta tttgtctttt ctggacattt 8280 tatacaaatg agattttaca acatgtagtc ttttgtgact ggcttttttc ccctagcata 8340 atgttttcca ggttcatctg tggtgtagca ggtatcagta cttcaaccct ttttattgcc 8400 aaataatatt ccactatatg gataggtaac attttgttta tccattcatc aattgatgga 8460 catttgggtt gtttccattt tcttgactgt tatgaataat gttgccatga acattaatgc 8520 acaagttttt gtgcagatgt gtatttcat gtgtcttggt tttataccta ggaatagaat 8580 8640 tgctgagtca taggagaact cctccatgtt taaccattaa tgaactgccg aactgttttc 8700 caaagaaatt gcaccattgt acaatcccac cagcaatgta tgagggtaga atccctgatt

			1			0760
tttaactgat	cattgaactc	aggcccattc	aaaacaaaga	tgacatttcc	taaccttcct	8760
+ at aat	totacceat i	madatdddad	aadaadttad	gittigteet	Laadagadag	8820
t	agatacaata :	acticacqeet -	gtaatcccag	cactiliggga	ggccgaggcg	8880
	atagaaccaa .	dadttcaaga -	ctagectgae	caacalggag	adacticgic	8940
+ at a at a a a a	atacaaaatt	aactaaacat	catagegear	goolgiaale	ccagccaccc	9000
aggaggtga	ggcaggagaa	togottgaac	ctgggaggtg	gaggilgiga	Lyayccyaya	9060
ttataccatc	gcactctage	ctgggcaaga	agagcgaaac	tecateteaa	aaaaaaaaag	9120
cigigeeace	gagtacattc	tacactctcc	tctcctccac	cctgccccct	ttccagtggc	9180
tagatataga	catagtagta	agctatctta	gatcatgtgg	acaagggaaa	cacataggga	9240
tattagaagg	tccagacaga	aggaacttag	gaccctggac	agctttgtgg	agcagtgctc	9300
agataggagg	atasaattt	atataggaga	aaacatacat	ttccagciii	LyLadyccac	9360
tattatta	ggtctctctc	agaggaggga	aatatataat	ttaactaata	tattttcttt	9420
at at a at t at	totttattt	gattatactt	ctacttctct	degeererrr	Lagglaggag	9480
etgigation	aagcactaac	tcagaatata	gaccctctcc	ctcttgtaat	agtgccagct	9540
gtgetgetee	tgcttccact	ataggggaaa	gaaagaaaaa	atatggagaa	ctcacatcca	9600
tggagttett	tcctcaaaca	geaggggaag	attttattct	gctcacagcc	cattggccag	9660
ctcttcattg	atggccccaa	totaattoca	aaggagtctg	ggaagtacag	cacagcacat	9720
aactaactgt	aaagcgttaa	ttttctctcc	caaaggcttc	ttttattatt	attattattt	9780
ggatctttgg	cccgctccgt	anagagagat	agaggeeee	ggccctatct	cageteactg	9840
gaaatggagt	ctcccaggtt	cacceggger	tocagoctta	ggotocaaa	tagctaggat	9900
caacctccac	tgccatcata	caagcactcc	ttttttatat	ttttagtaga	gacagggttt	9960
tacaggcgtg	gccaggctgg	tetasset	ttaacttcaa	ataatccacc	tacttcaatc	10020
taccgtgttg	ttgggattac	LCCCaaaccc	cactatacco	gggggaatagt	aatattttct	10080
tcccaaagtg	ttgggattac	aggegegage	cactytacce	tagagatttc	atctactccc	10140
gacctcagcg	ttttctttt	etectgecat	gtacccccc	tcagagaeeee	accaagactt	10200
aagtcttcca	ctgctcctat	etgetgatga	ctcccaaaac	atctccagtg	gacageettt	10260
ctctcctggg	cttgagacat	atglatecaa	cigcoagaac	ccaaadtcaa	tttcagtggc	10320
gggcacaagg	ccacactage	ttgtgggtac	aaytaatcac	ttcccaaata	ctctgagtct	10380
tctccactcc	cacattttt	caaccccryg	adatytteet	actcctatt	acttttttc	10440
ctcttctctt	ttgatgactg	tggttttgtg	actygatygt	agcccccgcc	acctcaactq	10500
ctttcaaatg	aattttctct	taggaggett	ttagccare	attaggacto	ctottaatct	10560
ggcttgccct	atgcctatct	gaaacccagc	ttaggtttga	traaaraaaa	tatcatcccc	10620
gagctctcac	ttcctgtccc	aaccigciia	ant+t+t+co	teteetteae	cttcctcatc	10680
ctagttgctc	agaaacctgg	gaatcattgg	tacettacta	cccccata	tatacttacc	10740
caatcagtca	ccaagtgcta	teaactetge	geettestt	teteacttac	tatacttacc	10800
tatcaaccat	cactgctatg	ccatactica	tagagagagat	cctdadtdat	attattaaaa ctctccatca	10860
tatccctaaa	tagttcctct	geettetete	cattatata	. ttggtgata	ctctccatca	10920
tgtacctttc	agtgactgct	tgcacaaged	ant+stagtt	. ccggccatag	tctgctctct	10980
tgaaccacca	a gagccaagca	cetgggttet	gactergge	, gcaacccca	ctgcgtgatg	11040
atggacaggo	cacttgatct	cctcaaacct	. cagilicita	accadacydd	tgattgaatt	11100
cagtcactta	a actttgtatg	tagtaggtag	geactgryca	adacatacta r dattcatca	gtggatatag	11160
agatgaataa	a gaaaaagccc	ctgcactcaa	agagetete	, tattatata	a caaattattg	11220
tgcagttaga	a tagtaagtgo	tataatccag	gaacacacag	g egeegegege	a ataatgtgga	11280
atcagtttat	t ctccagagca	gaaaaaggtg	aaggeegaag	adycacted	a gagtgatact	11340
ggagctgtg	t agcaggggct	actactgttc	CCCCaaacc		tettectgag	11400
taatagagt	c ctttttcago	: taggcataca	gecatecaaa	a acaaaaacc	a tatttcccag	11460
cctcctttt	c agctaagtgt	agccatgtga	ctaagttgtg	g gccaarygg	a tgtcagtaca	11520
agtggtaat	g gcaatatctg	ggatgtgtct	ttaaaaggaa	a ggaacatyt	c cttctccttt	11580
tcctccttc	c tgttccctgg	gaggtgaact	tggtagetg	g aggrgaage	a gctggaactt	11640
ggatatgag	c gtcttgttga	ı tgataatagt	gcaacaaga	t aaaagcagc	c cgagctggcc	11700
tacatttac.	a toadaaddaa	ataagactco	c attitigitta	a agctattci	e llycatatat	11760
atatacaca	t atatatcago	: taaqtqtaqq	catgtgact	a actigings	c aatgggatgt	11820
anatatana	t dataadadca	a atatettata	a tatatatat	g Egtalalal	a Cacacacaca	11880
+ 2 + 2 + 2 + 2 0	= tatatotato	r caadaatata	a aaatataca	t gigigigig	L atatatatat	11940
acacatata	t atdtcccttc	r cadccaadt	c taattetaa	C Laaladaa	c taactetaaa	12000
222442242	t atattcacca	a naggatagg	c tatttcaag	c agagggaag	c clytataaag	12060
acticadada	a tactataatt	t ttatqtqqc	a gcagatgag	a ciggaaalg	a gicaggaiga	12120
gccacagtg	g aggatgaatt	aaatgggca	g gagtgtggt	a gaaagacct	g ttggaggcta	12120

						70100
tgaatgcaat (caaggtgaca g	gacaactggt	gcaatgatgg	tagtggaaat	ggaggagagg	12180
agattgatte :	aadatdcatt 1	taggaccaag	aatcqqqayc	Ligigaacgi	gegeacgage	12240
actatagaca	aaataaatat (ntcatcagag	aagatctgag	Cattigggct	egetetete	12300
agagagata	cdadtddadt 1	tcagcttttc	ctcatqqqqq	adatityatt	cecgeeeeag	12360
++cctagaac	tcadadtccc :	taacccaaat	gcctcttgcc	altitation	Cacceggee	12420
agottccctt	acttattaca (agattattc	ataaaqaqqq	acycygccyg	CCCCCaaccc	12480
+ a + a a a + a c t	aactaaaaat i	acctacagaa -	cctqtaqtqa	agetticayy	ggctgctcgg	12540
attataacta	ataggtgaac .	actotccatc	ttgccggclg	ggacacageg	accerggged	12600
attatataaa	adaddddccc	ttggcagaca	aacagguucu	Lecterating	cgggccagcc	12660
aggagatcag	taaaaaaatt	aaaggtcatg	gggtttggga	gaaactgggt	gaggageeea	12720
acceptece	ccataaaact	cctgggaagc	acttctctac	Lggggcagcc	cctgatacca	12780
aaaaaataat	taaccctctd	aataccaaaa	aaaqqqcaqq	aggigagige	cgggaggoag	12840
atasaatass	cttcttttda	acttccacqt	ggtalllact	Cayaycaacc	ggegeeagag	12900
actegaaace	ctagagtata	aagcagaatg	totgototot	grycccayac	gegageagge	12960
gcccagggcc	ggcagaggga	tagagatcac	agtcctaagg	gagggcattg	caggtggcct	13020
gagcagccgg	cctggggtgg	cccctaagac	atcctcttqq	aacattttgg	cagagttgcc	13080
tattagagat	cattatggct	cagtttttcc	accatgaaat	gggaggagg	gagacaggtg	13140
terredecer	aggtggtaga	agtggcctag	agaactgttc	ctggggtctg	ggacctttgc	13200
ggcaggggag	gagcaccacg	ctccctccta	tataactaaa	gtagcaagag	cacgccctct	13260
gaaggggtta	gaggaagaca	ccctagctc	cttgactcac	ctaggtcagt	cctcttgagc	13320
teceatgui	ctgtgctccc	cadeccaada	aaggggtaac	aggatttcgg	gcagttgccc	13380
cccaacagct	cccctgggca	agtecetae	accatatece	ttcatctcct	tcttccccta	13440
ctgcagaggc	cctccacctg	tetteteaga	gcaaataata	gcaagcatgg	ctgccgtgct	13500
accaggeete	ctggctcttc	tttcagataa	gtaggtaatg	ctgacttcaa	catagagata	13560
cacctgggct	ctggccagag	aggestates	accetagaaa	addadadccc	aggccctgat	13620
tgggtggagg	ctggccagag	ggccccgcc	cacccagggg	cagaaaagact	tctgggacta	13680
tacctagtcc	ctctccacag	agaaagaga	cacceaggea	atccatcage	agaagatggc	13740
cttcagccag	accagegggg	acaaaggcag	ggcggagcag	daadddaadda	gacagetggg	13800
tegegageee	gegtgagtge	tetactacet	caacctctgt	gaagggagg	gacagctggg gggacagagg	13860
ccatgccatg	atgacetgee	atatagaaat	caaccccege	ctagactett	gggacagagg tagcgcctc	13920
aaaggagcgg	tgetagetet	geergeagat	actattacc	cccttgctca	tagegeeete etgaggegeg	13980
tgcctgcagc	ccccgccrrg	acaactccgc	tacaatacaa	agaatcaaag	ctgaggcgcg gatgatgtgg	14040
ggacctggga	tcaatcggga	ggacgcccgc	ggtgtggtt	tatatagaca	gatgatgtgg atgtgtttgt	14100
cgcatctatg	tttctttgga	gagigitgia	ggtetggatt	agccctcgac	atgtgtttgt cctggggcca	14160
gcttcgtgcg	tgagttgtta	ceggecaggg	teaggacaag	atgacttggg	cctggggcca	14220
acgccctgcg	teettggtte	ccccagayga	: atatctotco	ccttctccad	gacaaaggag	14280
atgatggggg	ctagcagtct	gacggccrgg	acaccegece	tagaaaaact	gaccctgaaa	14340
gacagccttg	agcaagacct	caacaataty	aacaagetee	cggaaaagca	gaggeetetg	14400
agtgggagcg	aggeteeteg	geteccacag	gacccggrgg	taaceaaaaa	geagetgeag	14460
gaggagttgg	aggaggtgaa	ggetegeete	: cayecctaca	cctacacaat	gcacgagctg	14520
gtgggctgga	atttggaggg	cttgcggcag	, caactyaayt	tacacataat	ggatctgatg	14580
gagcaggtgg	ccctgcgcgt	gcaggagctg	caggageage	. ctttactac	gggggaagac	14640
accaaggccc	agttgctggg	gggcgtggac	gaggerrggg	tocacccata	gggactgcag	14700
agccgcgtgg	tgcaccacac	cggccgcttc	aaagagetet	. cccacccacc	a cgccgagagc	14760
ctggtgagcg	gcatcgggcg	ccacgtgcag	gagetgeace	totagegegge	tccgcacgcc	14820
cccgccagcc	: ccgcgcgcct	cagtcgctgc	gtgcaggtgc	: colocogyae	a geteaegete	14880
aaddccaadd	r ccctacacac	acqcatccac	g cagaaccig	, accayctyce	gegaagageee	14940
agcagagcct	: ttgcaggcac	tgggactgag	g gaaggggccg	gedeggaeet	c ccagatgete	15000
tecgaggagg	r tacaccaaca	acttcaggct	: ttccgccay	j adaddiacci	geagacagee	15060
accttcactc	: acaccatcaa	ccaqqaqact	z gaggaggte	: agcagcagci	ggcgccacce	
ccaccaddc	: acadtdcctt	cocccaga	g tttcaacaaa	a cagacagig	y caaggereeg	
agcaagctgg	. aggcccgtct	ggatgaccto	g tgggaagaca	a tcactcaca	g Colleatyac	13100
cadddccaca	a gccatctggc	, qqacccctg	a ggatetacei	gedeaggee	accedagee	10210
vettatetae	r ggageettge	r ctctgagcc ¹	t ctagcatgg:	t teagleelle	g adaytyyccc	13300
attaaataa	a dagtagaago	ı teetqtqea	g gacagggag	g ccaccaaag	g ggergergre	13300
tectacatat	- ccadcctcct	gegaeteee	c aatctggat(g cattacatt	e accayyette	13420
dcaaacccad	r cotoccaqto	ı ctcatttqq	g aatgeteat	g agttactcc.	a illaayyyiy	13400
agggagtag	g gagggagag	g caccatgca	t gtgggtgat	t atctgcaag	c ctgtttgccg	T 2 2 4 0
*						

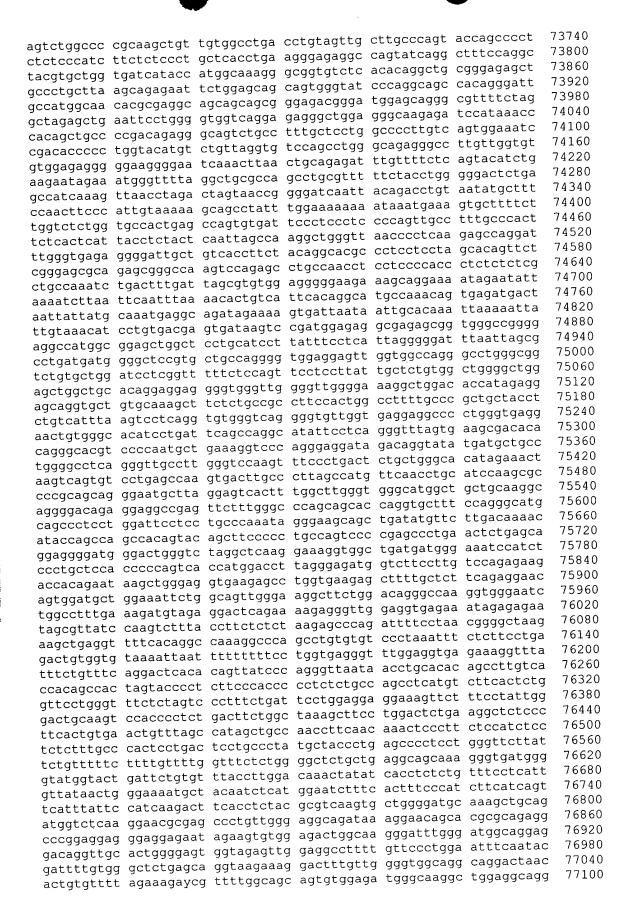
tgatgctgga agcctgtgcc actacatcct ggagtttggc tctagtcact tctggctgcc tggtggccac tgctacagct ggtccacaga gaggagcact tgtctcccca gggctgccat 15660 ggcagctatc aggggaatag aagggagaaa gagaatatca tggggagaac atgtgatggt 15720 gtgtgaatat ccctgctggc tctgatgctg gtgggtacga aaggtgtggg ctgtgatagg 15780 agagggcaga gcccatgttt cctgacatag ctctacacct aaataaggga ctgaaccctc 15840 ccaactgtgg gagctcctta aaccctctgg ggagcatact gtgtgctctc cccatctcca 15900 gcccctccct ctgggttccc aagttgaagc ctagacttct ggctcaaatg aaatagatgt 15960 ttatgataga agtttgcctg gcgtgactct catttggacc atgtctgaaa gcagtggcct 16020 caccactate eccaaageae acceateace cactecatte cettgetget ettteteate 16080 cacccactcc cagtccaggt ctgtcaaagg gggtctggct gggctctgct tcagggatcc 16140 tggctagaca acggctgtct gtcacacctg gcaggagggc ctgggttacg ggcccttcct 16200 ctgcacctgc actgttcact agcctgctcc cccacaggac actgtgcatg gaatgcaggc 16260 tgtgtctgga agagctgtgg ccctggtgga cctaagattc ctgaggtggg ctgcctcctt 16320 tgttcctgct gttctagagt ttgaatggcc tctttttatg ccggactctc ttctggggac 16380 tececteact caggggeace aatgeteect atagateece tgggaactga aactggggtg 16440 tggtggagga cgtggaaagg gtaaacacag ctccttgtct ttggacttcc ctgtccggcc 16500 cecttteete ceageteage etactgteee egggttetea geacetgeet geteeceaae 16560 cccatagcac agaccccaca catatgtagg ctcatcatgc ctgcaggctg gtcttccctg 16620 acaccgtgga ttttgacaat gttggcaaca gaactgggtt gtggacccag cacctggaga 16680 gaggaagtgc tagaaaggta gaaataataa aaggtgtttt tgttgttgtt aggaaactgg 16740 aaaagcatag gtcaagggct atgatgggga tgaggaggta ggagtgaaaa tgagggctgt 16800 gtacttgagg ctgggattgg ggaaggtagt gatgaggaca gaatagggag tgggaagaac 16860 agaaagggac agagggattc agggattgtg agagagggga agaggctgag ccacccggag 16920 gggcgaccta gcacgcaagc agtatgtggc ccaacactgg aaccaagcag cccggctccg 16980 ggcgcacctt ctcagggatt cctcagggac aagtccagcc ccttgtcgtc aaggctcttg 17040 tagaccgacg tagggaccaa tagaaccccg tgcggtggag ctattgtgaa ggagcaaaaa 17100 agtgccctgg ttctaagagg acgtcttagg ggaagtgacg gctgagttga ggtggatccg 17160 17220 getggegatg taaggttega gecatataaa eeegggaace gggageeett gaegacattg ttccccgagt gcccggagtc tgcggctttt tttggggtgg tggcagctgg cggaagtgac 17280 gggagagggg tggggccgcg agagcggcgg aagtaggaag ccgaggtctg aattgcgcgt 17340 ggtggccatg gcggccagcg gggctgtgga accagggccc ccgggggctg ccgtcgcccc 17400 qtcqcccqcc ccqqcccqc cqcctqcccc tgatcacctq ttccqqccca tcaqcqccqa 17460 ggacgaggag cagcagccca ccgagatcga gtcgctatgc atgaactgtt actgcaatgt 17520 gaggcggggg cgcggccgcg agcggcgggt gggtagggct tgtgccggga cgagccgggg 17580 gtcagaccca gccaggtggg cccggccggg gaccccgagg agcgcccgga gatagtaggg 17640 cggggaaagg gagtttcatt gatttttttc cttagctact ttctacttca ccagggcatg 17700 acgcgcctcc tgctcaccaa gattcccttc ttcagagaaa taatagtgag ctccttttcc 17760 tgcgagcact gtggctggaa caacacggag atccagtcgg caggcaggat ccaggaccag 17820 ggagtgcgct acactttgtc tgtcagggct ctggaggtga gaggacctca gagcaggtac 17880 ctcagtattc tagagagaga ttcggtactg gggtcagagc tctggtccag gcggtcggat 17940 cttaaataaa tccccctatg tctcctagcc ttagtttctt ttgtaaaatg gtactggtgt 18000 tgtcatcagc tcaagtgaga taagatttgt gaaaatgctt tgtaaatgtt gtctgagggt 18060 atgaaatgag cagtagttgt tatgaatagt attctcacca tttggacagc ctggctcaca 18120 ccacctgtac tattcgaaag gagcagtctg gaccctgtgg agtggcgaga gggagagaca 18180 gctgggctgc ggtctgatgg aaggggacgg tctggttatt acttgaggag aagctgttct 18240 gcagtctctt tgtactgaac gtattctttt cttcccagga catgaacaga gaagtggtga 18300 agactgactc tgctgccaca aggattcctg agctagattt tgaaattcct gcctttagcc 18360 agaaaggagg taagtttaag atcagagtat ttgggctgtt cgcatgtagc tagaatctta 18420 18480 ccctctttct tgcaaaaccc cctggtgcca ggtctagtgg tttgtgtatg ggttctacca tgtaatcatt gtaatcttca ttagttaatc atgagtggaa agcttaggta aaacagctcg 18540 agatggtaga aagtaatggt aataccatag tgtgtttatt gtagaatttt agcatcacta 18600 ttatcagaca tgaatggaac cttgcacctg gccttctcat tttacagatg aggaaattaa 18660 gacccagaga gttcaagtga attgcccagg gtcatacagg gacttgatag cagagctgag 18720 gctaagtcac acttgtcttt tgttcttgtt cacaagctct gaccactgtt gaaggattga 18780 18840 tcacccgtgc tatctctggc ctggagcagg accagcctgc acgaagggta agctggggtt 18900 ttctgattgt agcagctcaa ggaataattg cttatataga gtgtcccatg tgtctgaaga gtctctgact aagtgttgga aacttgctgg gtaagcatat ggtggtgctg gagctgctag 18960 aatgttgcat atgttataat tattgtcttt tccacttccc tccctcagta tatattcagg cctcatcaga caatataaca ttacctctga agagcctttc ctaatcccct tgggttatct 19080 gtgtttcctg agtattccac tgcatcttat atttattatg acagaagtaa tatattatag 19140 ctgcatcttt agttatttgt ctccttaatt ggttggggag tcccatgaga ggactgatat 19200 atatactatt atatctctaa cgtggcatga gtgcctgggc taaatggttg aatgagtgag 19260 aaaaatgagg ctcacctgtc accacccgtc aacttcaggc ttgtttgcta catctcattg 19320 tgaagcctga gtcactctgt ttccactcac actgagatag gtggtgactt cctaatggaa 19380 gtaacatggg catgacaagg ggcagggcat aaggtacacc accagggctg atgctttact 19440 ctctgttcat ggcaggcaaa caaagatgct acagctgaaa gaattgatga gttcattgtc 19500 aaactgaagg agctaaagca agtagcctcc cctttcactc tggtgagtat tgagaggctg 19560 gagttgccct tgattagggg aggagggacc attaagactg ctgggatttt ccactgtgat 19620 gcctgcgtgg tctgatagta ggtgatgtag gattgtttat gattttcttt tgcagtgact 19680 ctctcttctc ccatttgtta gatcattgat gatccctcag ggaacagttt tgtggaaaac 19740 ccacatgete etcagaaaga tgatgeeetg gtgatcacae actacaaccg gaccegacag 19800 caggaagaga tgctggggct tcaagtaagt ggactgaagg atccagaaga atgctctgga 19860 attatcgcgc actctggatt gcttggagtc agtggaactt attttgctgc tgctgctctg 19920 tgtgccctat ctcagcttgt ttgtgcttct catcttgctt atgtccagga cttgggtaaa 19980 cttcacagaa aggatggcag tggctgtgat cctatcttaa gtcctgttct tcctttggtt 20040 ggggctttac tttgtggttt ctctaactga tgaggtggca cctgacataa ctgatgaggt 20100 ggcacctgag catttetece actecaggge agggtgttgg ggacactgag gtatacctge 20160 caacttgcga cctgcatctt tgctatttta ggaagaagca ccagcagaga agccagaaga 20220 ggaagatete agaaatgaag tgagteacat tggetactgg tgaggaagga geagagttgt 20280 gggctgagac tgatgctgtt cagcatctgt cttccttgtc accaacatag atgaccacta 20340 gcataccaac tgagtgtctt tagcctgaac atcccatctg ggagggctca ccctttgtcc 20400 teatgttgtg ttccaggtge tecagttcag cacaaactge ccagaatgea atgeecege 20460 teagaceaac atgaagetag tacgtatett ttgecaagea gttgggttge tetteatetg 20520 actcaggcat gaagattata atcaggctgg gagcatccct ttcaaggaaa acacatgctt 20580 tatacccagt gataaggaag atattatett tgattagact gtgtaccttg ggttttgtgt 20640 tcaaagagaa aattaggcca tggtcactag gctgtgtgtg tgtgacctga gccatgcctt 20700 caaatgtgtg aacagggatt gccatgggtt gggaacttgc cctcttctgg aggactctgt 20760 gggctgcctc ttgtgaatat ttcctgcagt tctgggacca gcatatgttt gtgtggggtt 20820 tggetttgtt tttccccaga tggtggtctt gttcgcctgg aagtagattt ccttaactcc 20880 gttttccaga aatccctcac tttaaggagg ttatcatcat ggctaccaac tgcgagaact 20940 gtgggcatcg gaccaatgag gtgggtgggc gccattattt gggaagaaga ctagcttaag 21000 ggtaaccccc ttttaactat cattetteet aagtaettea gtaetegggg geagggggtg 21060 tagagtaget tgggtetttt tettaggtet agtgeagggt gatgageeet tgaaggaatg 21120 ggaattagcc tagagaagaa aagttagaga ttctataact tgtttaagac atattaaagg 21180 ttgatgatat ggaagagaga agtettttga eccaeteete agaggtgtgg aagtteaggg 21240 aggcagactt tgacttcaca atgaagaact caatagagct gtctgaaaat agaatgagct 21300 gccttagaga attataaatt cccttcccct gagtgtatct gagtataagc taattaaatt 21360 ctttaaccag aatattataa aggagaccca cacattggat gcagtggatg aaaggactgc 21420 aataaatgct taaaagtctc tttcaacccc aaaagtcttt tttttttt ttttttaa 21480 gggaaattca gagtttattg gcaatttggg ataagttttg gcacgttacc agggttgggc 21540 actgttcctg gccagctctt ggtgtttttg gtttgggcga ctgctgttta gaaggctctt 21600 tetttggtag ctattaatga ccctaactga ttggatgtcc aagcctacac tccaggtctc 21660 ctgggtacca agtgaggete aggtettete tetgttgete etgaetgtta tegatgeagg 21720 tgaaatctgg aggagcagta gaacccttgg gcaccaggat caccctccac atcacagatg 21780 cctcagatat gaccagagac ctcctcaagg taacagtctg cttgggaaag tcactgttgt 21840 cctcataagt tagataaact gtctctatct aggggaagtt gtcttttaga aataatgttc 21900 agggacatga ggtateteet actteeetgg etttgaggae eeetgageag agggagttaa 21960 tctaagattg gaattgcagg tttagaaggt gaccctgtta gctctttctg atgacctggt 22020 agetttttgg cetecagtgt etatetgggt cetettetet gtetgteece tagtgacagg 22080 atacctgaca gctcgaagct atgactgagt ttccctttat taagttggat ctattcccgt 22140 ggttcagatg gacaggagtg agtctcaagc tttaacaagg gagtcagaga aaactgagac 22200 agetgeeett gteegeagte tateaetget ggtattaatt gggeaggagg cetetggttg 22260 getttetttg ettetgaett aaagettaaa etgaeetete attteacagt etgagaettg cagtgtggaa atcccagagc tagaatttga actgggaatg gcagtcctcg ggggcaagtt



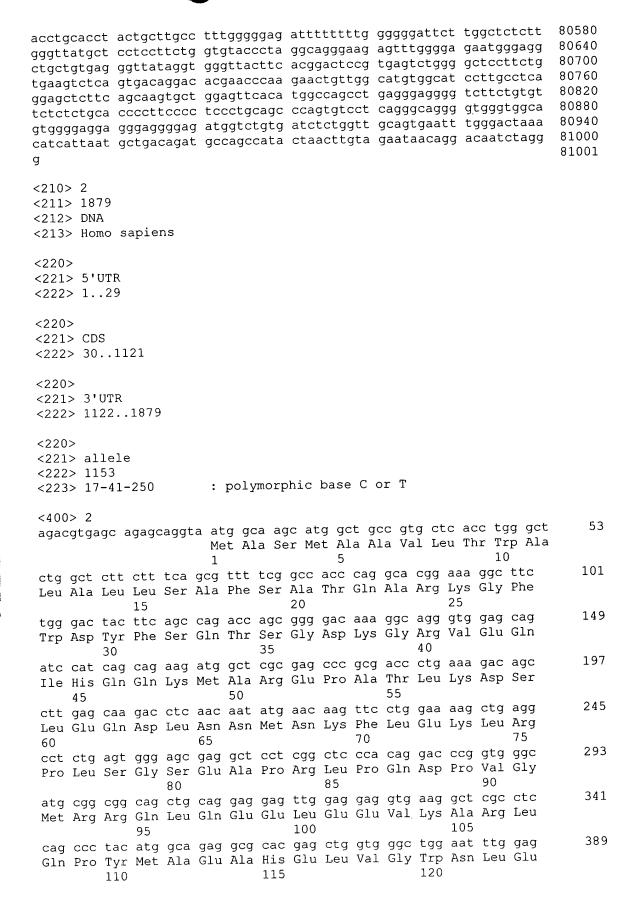
ctgtagtcaa gctcttgtcc cagttctgga gttttcattt tgcaaatctg attatggatt 25860 gaggagaaat ggtaccttgt ccggaggcca agataggaaa ctgataggct ttaagttgac 25920 tgaggagaga gtctggtgat tgatgtacct ttaccattta ttggatactt accatgggtc 25980 aggcaaaact cttctaagtt ctttccaaga ttaagaccat ttgtcatact tttcataaga 26040 aggtgcagat ataacaaaat aggtggattg ttccctgatt ctggggctgg ggtcttctac 26100 ccctggccca tgtgggctct gttgctaccc actagttcag tctagccatg ggaaattgga 26160 ggccaataaa aagaaaaaaa cccaaaactc attctgttct tgggaaggtg ggaattggaa 26220 gctgcctgca gagagggga gtggcacagc ggcactgatt gtctctcctt gaccttgcag 26280 aatgtgtatg cgcctgaaga tgatcctgag atgaaggtgg agcgttacaa gcgcaccttt 26340 gaccaaaatg aggagctagg gctcaatgac atgaagacag agggctatga ggcaggcctg 26400 getecgeaac ggtageagtg ggtggeteaa gggeeageet ceagegetge tetttetgta 26460 ggttatttat tagtattgga tgaaggcgaa ggctgggagt gtctttccca ccagcccttg 26520 cccatggtgg ggaggacatc tggtctgagt cagagatctg tgcacacttt ctaaacagct 26580 tgtgatgcaa gtgtgagcct attgtgttac ttgaccttat tttggaagtt ttgaattggc 26640 ctaggaggaa acccagaaat gaaccagggg tatgtcatca cttttttcat atcaagtcct 26700 cacceteett ccacataatg etetateete taaggttgga aetetgaagt tggagaaggt 26760 ggaataaagt tacacctgga gtttgttgtt ggttttgagt atataaaata ctgactttga 26820 acaggaaagg agtctcctga ggggagaccg agtccagcac aagtgaagga gttaccattg 26880 aaatgatgac tttcaaacag cactggcctc tgtattgacc ctatccttgt ttgatatcat 26940 gctgttagaa ttcagcctcc taaagaaaat tttcccgtgt atctactgta atttggggat 27000 tgcagctggc atttaattca ttccttcagc agatgcttgc ttatctactt tatgccaagc 27060 acaccacaga acagaggaca aaataaatct ctttcatgga acttgaagtc tagtggggaa 27120 aaatgacaat aaacagatga ggaaaacagt acatcggatg gtgattagtg tcatggagga 27180 atgtaaagca gggaatgggg ctgggttgtg caaggaaatg gggagtaggg aagatcttct 27240 gaacaagaag gtgataattt gacatttggg caaagctgag gaggaggtca gggagtgagc 27300 tgtgtgggta tctgggggaa gagatttcct ggcagaggga actgcaaatg ctagagctgt 27360 gaggttagag ccagtggggg tacctgatca gttagcccta ctctcagtta gaaatgttga 27420 aacacattca tocagagaga aaggaggoto totgoagtto ttotgaaagt taaggaccag 27480 tgaacactet getgettggg eeetggaett eeeageeagt gttetttgea etgtagtete 27540 ctgcctctca taaacaaaag gtgactcctg tggtgcagac tgcagggtat ttgttcaata 27600 aagaccagtt cattgattaa gatgttatca caaaccttat tgctttgtgt tgcaaacttt 27660 ttttttttt tttttggtag agacagagtc tcgcgctgtt gcccaggctg gagtgcagtg 27720 gtgtgatett ggettattge aacetttgee teeegggttt aageaattet geeteageet 27780 cccgagtagc ggggactaca ggcgcacgcc gccacaccca gctaatttct tttgtatttt 27840 agtagagacg gggtttcacc gtgttgccca ggctggtctc gaactcctga gctcaggcaa 27900 tecgccagee ttggcetece aaagtgetag gattacagge gtgagetace gegteegget 27960 gtgttgcaaa cttaactctg aagaatgagt tagagatgat ttagcaatca gacatctact 28020 ctcgttgctc tgttaaacta ctctcaaagg tcacaagtga ttttccactt ggaaagtgtt 28080 atctatttct gtcacatttg atagtggacc atctcttctt aacccttctt ttggctctcg 28140 agatactgta cccttggttt tcccttcact ttgaatattt cttatttgga cactttgcct 28200 cetecectet tactaaattt gtttetgaga gttetgettt cagacatete tecatateag 28260 attetttggc atettactat catgtgggac taacttecat acctgtatet ctaattetg 28320 taagtgaggg cgagagtaag gtgtttggag actcaggtta gcaaatgact cattcaaact 28380 ataaagcttc agtactttgg gcaaacttct cacaggcaac tattctaccc taagagatta 28440 tetetagata tgtttecage tgacttggga atctaagttt accagacaac cetetgatet 28500 atcatttggt ctcttaagta gacttcccca tagtgtaggt gtgctctgtt aagataaact 28560 gcagtatcag gttcattttc cattgtgaag gaaaaaaaat ggcactctgg cttattactg 28620 aatctcttgt gagtttggtt ggtgtgaggc aatctcccag aatccaccca gttcctagga 28680 aatgatgacc tgagtttctg aacttgaaga ctgaggacca ggtgccagac tgggataacc 28740 cagctaaggt acttectgee etttgatgae aaggeattet teagttteat accettetet 28800 tgaattatct ttcagctcct ttctcatttc ataaagtgtg tcaggatggg agcttacata 28860 tagttaactg agtcttgctc cacagcaccc agcatatgac acatggttaa taaaatctgt 28920 taaaatcctc catcatagat taaaccctat taggacacta gggataacat ctataggtaa 28980 aaagataggg aaagggtctc gctttaaggc cagggtaggt gagtcaaagt gccaggaaca 29040 tgtggattca gtttcacagc catgagtaac atttaagtgg aaaaggtttg tgattgtgt 29100 aaaaaaggaa agtggttcat gcatgagggc acgcctccta ctttcatggg tcaagtatgt 29160 gaaatgcagc catgttcggt cattagacgt gtggacgaac atacaggtag gtactgaatg 29220 tacatctgtg tcatgatgag tggaggaggg gaggtgagtg ttgggagcaa gtatgaaggg 29280 cagttgactt ggccaactga aaactttaat gatggcaaca ctttcattct aacatcagta 29340 tatttccttc tttgtacacc tgtggtatgt gcctgatgca cactgcagaa aatggtgtct 29400 ctgcttacat ttagggcagt ggtggctaag actacttggc tttattccta ttaaaaaatg 29460 ttttttacac acttctttt aaggcaaatg gcagtgtttc caactgtgga gagaaaaagc 29520 tgcttatttt gtgcgttcac ctcagtttag tattggcact tccaatgctt gttttcctag 29580 tctgtaaaat ggggataatt aggataaaca aaattatccc cattttacag gtgacaaaac 29640 29700 tttttttttg agacggagtc tcactctgtt gcccagactg gagtgcagtg gcgtgatctt 29760 ggctcaccac aacctctgcc tcccaggttc aagcgattct cttgcctcag ccttctgagt 29820 agetgggact acaggtgcac gccaccatgc ctggctaatt tttttttt ttttttt 29880 ggagacagtc ttgctctgtc acccaggatg gagtgcagtg gtgcgatctt ggctcactgc 29940 agecttgeet eetgggttea ageaattete etgeeteage eteetgagta getgggatta 30000 cagacgccca ccactgcacc cagctaattt ttgtattttt agtagagatg gggtttcacc 30060 atgttggtca ggctggtctc aaacccctga cctcgtgatc cacctgcctt ggcctcccaa 30120 agtgcaggga ttacaggcgt gagccaccgt gcctggccag aagtagagct tctaagaggc 30180 aggtgtcaaa cccatgccag tcagactctg aaacctgagg tctgaatatt ttaagctcag 30240 ctccacaatt actgtatttg ttctattaga tacaactgca gagagaggcc aaagctcaga 30300 gcaggccatt ggcacggcat ctgatcctgc ttaactgccc tgcagcacag ggtggagaca 30360 cttgggcctt gtcaggctaa gggactgggg taggatgggt agcagtggaa ttgaagacaa 30420 agaaaacaaa tgggcagaag atgggtgggt ggaagttcag agggctatcc tggcagtgtt 30480 cactggagca gaagtgtgag gctttctgaa tgcctgctga caccagggtg gggcagggct 30540 gtgtagtgtg agatgcacca aattggacga gaagccaagg caggcttgtg tatggggtac 30600 cetggggccc tecgeetagt gaageectat etteteagee cagegteete gteteacaag 30660 ccctcagage cccageetge tttcctttet gggcctgtge tgcaacecec tcaacatgge 30720 ccactgggta aaaattcatg cttcaagact gatccccaag cctgttttgt attatataag 30780 taaagaattt tttaaacact tatccccaga taatgtgtat ttatttataa agtatagccc 30840 tgtctgcttg actaatatat taaaaaagtg acctttttga ctcttggtcc aagaaactat 30900 tgtttgcact tttgtgtagt tgtgtatagc atcctgcaaa ttctgtcaga agtctgtgat 30960 ttcagtaaca ctaaaacttc tctctcaaat ggtacaagtt ttcagtttta agacaagttc 31020 tgggaatcta atgtacaaca tgttgactat agctaataat tctgtattgt ttacttgaag 31080 tttgctaaga caaatttgct taagtgcccc cccccgaac tactacataa attagtgaag 31140 gatgttttac ttaatttgat tttggtaatc attacacaat gtataattat atccagtcat 31200 cacattgtac accttgaata tatataattt tttgtcaaat aataaagctg ggaagaaaac 31260 gataaaactg acaatctaac atatatgatg aggtaaaaag atctggtatt tcaagaaatt 31320 tggatgacct cttgcacccc acttcgctag cctctactcc ctagagtcat gttctgacta 31380 tgtgaagttg agcaacttcc ttaatcttgc cacgcttcag ttcttatctg taaaatatga 31440 taatgaaacg atttgagaat tgtgagggtt aaatgagata attcaggtaa agctctaaac 31500 cccctgcaaa gaataaagtc ttttctttcc ccccaaaact tgagtgttag aattcattct 31560 ctctggtttc tctcttttac tatgctaaaa aatgatccag gtccgtcctt ctcattggca 31620 agattgtttt acagtttcct tcaagagata actgggggct acttgtaata gaacactaga 31680 agagttacac aggtettaga aactacgttt tteatagtaa ttatgttggt ttgcaettee 31740 tggcttcctt tcttggacgg taggtacctg gaagcctagt ggagcagatt ccccccactt 31800 aaagatactt ataaaaataa cgaacatagt teegatgace atgtgeecaa caeegetetg 31860 cgcacttcac acagtaatat catctcagcc tgtgaccgtt ccgagttagg tgccgggatt 31920 ctccctgttt tgtgataact tgcccgaggt cgtacagcta gccagctatg gaaccagtat 31980 teaaactegg ctacgetgca gecegtggee etecaettte ttgetegtge tetggagttt 32040 aageggeega tgggggeggg gteetttggg teaggttgtg geeteataga acagegettg 32100 ctgcggttgg atggatgggt gggtgggtgg gtgagtgaat gaagagaaga aacctggtgg 32160 cgtcgtccca gggctgtgga gcgccccgaa ggtgcgcacg tccctggcta gcctgcgagc 32220 gegteeeggt ggeegeacet geeageegeg egattettag eacteteege eactteegge 32280 cgtggccccg ccctgtcggg tggctggcgt ccgttacgcg ttgaggcatt ttgtccccag 32340 egecgaceeg tetetetgee eeegecgetg ceatggegge ageteegeeg etttecaagg 32400 ccgagtatet gaagegttae ttgtccgggg cagatgccgg cgtcgaccgg ggatctgagt 32460 ccggtcgcaa gcgtcgcaaa aagcggccga agcctggcgg ggccggcggc aaggggtgag 32520 ttggtaccgg ccggggcggg gcctgcgacg tctagccacc ccttcccaac tccgccctcg geogeegge agtteettee etettggegg gtetetagge tteteegeeg acceetgete 32640 atgctcaggg ccccactcac atcgcttgag gccccccgcc ttgcctctgc cgccccgctt 32700 acatctcgag cctctgagca gtagcgtcag tgcgttaaag ccggggtgta actttgatta 32760 ctettttece geettggtag actteegtee teteceatag agaatgaata ttgtgeeteg 32820 agaataatgg agcggattca aagcctctgt gcttggatct ttagggcccg gtacctgcct 32880 gtggggattc ccagatccca aggacttggt tctgaatcag agacctttga tcacctcctg 32940 ttactcttag taatagtcct aacgtgagaa gctaacattt atatagttat acttttcttg 33000 ccaggcacca ttataagaaa tttaaacata tataagttta tttaagcctc accacactac 33060 catgaagtgg gtattatttt catatgggac aactttgtgg cccagtgtag tgggccctac 33120 caaatcgttt tccacccaga accacagaat gtgacattta gaaatagggt ctttggagat 33180 gtaatcagtt aagatgaggt catacttgat taaggtgggt gccaaatcca agatgactgt 33240 ttgcctttta aaaagaggga agtatggata cagacacagc aacaaaggaa aaacgaccat 33300 gtctagatga aggctgagat tggattggat ttatgttgcc aaaagccaag gtatgcttgg 33360 ggctaccaga agctgggaga ggcaaggaaa gattctctgc tagagacttt ccagggagga 33420 tggccttgca gacacctgga tttcagattg ctagcttcca gaactgcgag agagtttctg 33480 ttgttttatg ccacgcaatt tgtggtactt tgttacagta accctaaggc actgagatac 33540 ccagtgaagt cacattgttc taaagaacta gtccaagttc ttttctggtt tggtgcttgc 33600 cttattattg tcttcgtctt tctgcctcgc tgacttgtgt ggatcctttg gaggcagtgc 33660 catgtgatga aagtagcttg agtgttggag cagcactggt cagagttcga atcctagctg 33720 tgccacttta taggctgtgt acccttgggc aaggtgtttc atctcactga gctgcagttt 33780 ccttatcttt aaaatgagaa taataataat aatggtttta ttaagtggtg gttgtgatta 33840 gagggattgc attaagtgac cctggctttt tgaataactt cacatcatgg cagtcattgt 33900 tattatttgg gctcaactat atagtttatc cacgtaacaa acatttattg aatatttcgt 33960 attccagtta ctgtagggtg ttgaggatgc ctctgtgaac aaaaaaaaca tagtccctgt 34020 tcttgtggag cttatagatt aatgggaata caggctttaa gcaactaatt acacaactaa 34080 togatatatt ttotttatga taaatgcaat gaaagtatto caagagtttt taacaagggt 34140 tettagtett gagtgagtgt gggatggtga gggaattggg tgaagcagte aagaaaagtt 34200 tgccaaagga agttaaattt gtgttaggac ctgaagaatg aggaagagtt tcctggaatg 34260 agaaagagtt tcctagcact ttgggaggcc aaggcgggtg gattgcttgc atctaggagt 34320 ttgagaccag tctgggcaac atggtgaaac cctgtttcta caaaaaatac aaaaaagtag 34380 teaggeacag tggeacatge etgtagteec agetaettgg gagaetgagt agggagaata 34440 acttaacccc gggaagtcaa ggctgcaggg agccatgatg gtgtccctgc actccagcct 34500 gggcagcagt gtgagaccct gtctcaaaaa agaaaaagac tagggccggg cgcggtggct 34560 cacgcctata atcccagcac tttgggaggc caaggcgggc ggatcacgag gtcaggagat 34620 cgagaccatc ctgactaaca cggtgaaacc ccgtctctac taaaaataca aaaaattagc 34680 caggcgtggc agtggtcgcc tgtagtccca gctactcagg aggctgaggc aggagaatgg 34740 tgtgaacccg ggaggcagag cttgcagtga gctgagatcg tgccactgca ctccagcctg 34800 ggcaacagag cgagactccg tctcaaaaaa aaaaaaaaag aaaaagattg aaaagagtag 34860 atcaggcaga gggaaggaac tgcatatgtg aaaactgatg tgataggaac ttggctcctt 34920 tctaagcacc aaaggatgac cagggaggtg ttcaaccaag gaagtagcag taggagatga 34980 agttgacctt gtagacaaag actggaccat gcaggatcct gtagaatttt gaactttatt 35040 ttaaaaccaa tagataaatg tttttatgct ggtatcctag aatgactctt tttgatcttc 35100 ttattctcat ttagaatgcg gattgtggat gatgatgtga gctggacagc tatctccaca 35160 accaaactag aaaaggagga agaggaagat gatggagatt tgcctgtggt atgtatcttt 35220 ggggctgtca ggattttgaa atgaagcaag cttctcaatt tcctttttt tttttttt 35280 gagatggagt ctcgctctgt cacccaagct ggagtgcaat ggcatgatct tggctcactg 35340 caacctccgc ctcccgggtt cagatgattc tcctgcctca gcctcctgag tagctgggat 35400 tacaggcacc cgccatcatg cctggctaat ttttttttt taatttttgt agaaatgggg 35460 tttcaccatg ttggccaggc tggtcttgaa ctcatgacct caggtgatcc acccaccttg 35520 gcctcccaaa gtgctgggat tacaggcgtg agccattgtg ccaggccaag cttctcaaat 35580 ttatttttcc agcttagggt agatttgtag gggggttagt tgagaacaga aaagaggtga 35640 cagtttccaa agagctgttt aaaatagttt tctttgctga tgcctataca ccaacttgtc 35700 tetttatgga gggtecatea geetagaaat gagatggate acagagagag gaettetega 35760 catcagtgtt agagtaatga tgagacttag ctgtggttca ttttgttgga atcttcctta 35820 aaaacaatgc tgaggttcag ttatagggaa ctttttattt gctccttttt tcagtgcttt 35880 aactaagett teaaattgta tattettgee taagtaetgg agatatgtag attaatagaa 35940 catagctgta ttttagagat tataccctag aatgaaaaac tgaatttcag ataaatttca 36000 acagtatggt aaatgttggg gatgtttcac atacgtacca agtaccatta gagcccgggg 36060

36120 aggtagcata ctttgtattc tgttgggaga tatcctgaaa gatgtaaata ctgagttttg aagggtaagt aagagccagg tggacaaaat cataggcaaa tgacctccca gtggttcatg 36180 aaaccattgc tgagaatttc tgagaaacaa agtggaaagg agagctgtag ataggctgaa 36240 ttccactaaa gttggtaaag atggattcca gtgagtattt aatattaatt cccagcaaaa 36300 36360 ttctttttt tttttttt ttgagacgga gtctcaccgt gttgcccagg cttgagtgta gtggtatgat ctcggctcac tgcaagctct gcctcctggg ttcacaccat tctcctgcct 36420 cagcetectg agtagetggg actaeagggg eccaecaaca egeceggeta attittgtg 36480 tttttttttg tatttttagt agagacaggg tttcatcatg ttagccaggt tggtcttgat 36540 ctcctgacct cgtgatccgc ccacctcggc ctcctgaagg gctgggatta catgtgtgag 36600 ccactgcacc tggccaattc ccagcaaaat tctaaaatag attatttaaa agagggcttg 36660 ctagtaatta gaagggaaat agtgatctta gggagccaat ttagttttgg tcagaagaag 36720 taaatattaa caatgtttgt tgttttttt taattttata aaagcaatgc atatttatta 36780 cagaatattt gggaattaaa aaaagtttaa agtttttaaa agaataaaca cttgcatgtt 36840 accatccaaa gataactgct aatacttgga tgcatatctc ttcaggtttt tctctttaga 36900 gattatacac gcttgtattt tatttttttg aacataattg ggatcatact gtacataggg 36960 37020 ttttggagtc tactcctctg ctaaataata tgttgtggat actctggtaa gaccttaaaa tattctttga gtgtatgatt tttaacggtt atgtagtagt tcaatatata tattttatct 37080 gttctgttac tggatacatg gattgtttcc acttataaaa tatcatacat cgttgtacat 37140 37200 agggtatggt tcgctttagt tatattccca tgttgctttc caaaaggtgc taccaattta 37260 cactcccact agaggtgatg agaatgccag tttgcctacg tcgtcaatat tagagcacta 37320 ttattattat tattattatt attattatta tttttgagac agggtcttgc tctgttgccc 37380 aggctgaaat acagtggtgt gatcatgccc cattgtagcc tctaccttcc aggtgcaagc 37440 aateeteeta eettagteet geaegtaget ggtaceaeag gtgegeaeet eeatgeetgg 37500 ctaattttgg gtattttttg tagagatgag gtctctgtgt tgcccagtct ggtcttgacc 37560 teetgggete aagtgateet eetgeetagg eeteetaaag tgttgggatt acaggtgtta 37620 37680 gccacatgcc ccaccaatat tgaaggatta ttaacaaaac aaaaccaata gcaaacctat 37740 gctgatttag caagtgagta atggtatcca gtttcttttt ttttttttt ttttttggtg gagteteact etgttgeeca ggetggagtg eagtggegtg ateteggate aetgeaaget 37800 ccqcctcccg ggttcacgcc attctcctgc ctcagcctcc cgagtagctg ggactacagg 37860 cacctgccac catgcctggc taattttttg tatttttagt agagatgaag tttcactgtg 37920 ttagccagga tgatcttgat ctcctaactt catgatctgc ctgcctcggc ctcccaaagt 37980 gctgggatta cagacgtgag ccaccgtgcc tggcccagtt tctttgaaca ctagtgaaat 38040 gaatcatttt ttatatggtc attaggctta tgttgtgggt gtattttatc atttgccttt 38100 tcacttagtt cataattgtt tttattattt tttttttttg agacatattc tcacactgtc 38160 accaacgctg gagtgcagtg gctcaatctt ggctcactgc agcctctgcc tcccaggttc 38220 38280 aagtgaacct cctgcctcag cctcccaaat agctgggatt acaggcgcct gccaccatgc ccagctaatt tttgtgtttt tggtagagac ggggtttcac cgtgttgcct aggctggtca 38340 tgaactcctg ggctcaagca atccacccgc ctcagcctcc caaagtgcta ggattacagg 38400 aatgagccac cgcacctggc cattttcttt tataatattg tcttgctttt atgatggccc 38460 aaaaacctaa acaaaggagg ctttagtgcc actgctctct gcattggtta aaacagatct 38520 tgattactga attcattttt gtaactgcaa gatcaccacc accaccagta ataatggtaa 38580 38640 aacgattatg atgattacga tagcagtggc agcacaggaa taattaatag gtgtcattta 38700 ttgggcattt atcatgtacc aagcatggct aagcttacgt gaattatctc attcaatcct tatagcaatc ctttgaatcc cacttttaca aatgaggaaa ttgaggctta gaataattta 38760 ccaaaggtta cacaaatgct aagtggccga gctggggttt agatcttaat tcatcttgcc 38820 cgaaacctgt gcttttaacg ctcagtgaga gatctcaaaa ctgggttata tgaagaatga 38880 tggtaggatt ttgggagaag tagagggcta ttatgacctg gatttaaatt ccagttctgc 38940 cacttgttag cttgtgacat tgagaaagtt actgaacttc tccgaatcag tttgctattc 39000 agtagtgtgg agcctttctt tacaggatta ttgtgagaat cgagttagat tatatgagta 39060 39120 aaccacaaaa cacagtacct tgcacatagt tgctactctg taactaggat ttattatgcc 39180 agcaatcttg aaagtttgtc atgtggactt acatcacagg tcagaactag aatgaattca aagaagttat aggaaggcag atacggtact agtaaaacta agaactttct aacatttttg 39240 aaaaatgcag tggactgtgt tgtaagataa tgagttcctt gtcaggaagg gattgggcga 39300 gtgaccactt attaggaata ctatagagaa gattctgatt tgttcagaag tttagaagat 39360 atgaaatgtg gttttagctc ttaaagatta atgattctgt gtacatctca gtggctcttt 39420 ttggttgtat tcaagaaaac ctatcactgt gactacctac aacaagaaag gattcataga 39480 aacccaaagt ccttgattag tgctaggcat gatgggggga gccacctatg tttccactgt 39540 39600 taatgtagaa gtaaaagtgt aaaaggaatt tagttgttag tttacaagtg gctgttgtgt acctagcagg ttaataaaaa ggtttgtaat gaaaaaaatt aacctttgca gggtaattga 39660 ttaattagag aaggatctac aattaaacca atacagtgac aatcagatgt ttatggagca 39720 aacataactg aagaccccta cttacttctt catgaccatt ttggatatat gtacgccctt 39780 qtqttaggaa tcggaatggt tgtaacttca ggttcttgag acagtgcttc ttggctggat 39840 39900 cctgtggatt tcctaagata ggaaatcttt actctcacag gtggcagagt ttgtggatga gcggccagaa gaggtaaagc agatggaggc ctttcgttcc agtgccaaat ggaagcttct 39960 qqqaqqtqaq ttccaacaat agataaatct aaatttccat tagtagggga gatcttttt 40020 40080 ccttttctat acttttcttt agaggaatgc atagtttgtt ttagcatgtc attgatcctg aaaaataaag caggaaaaag gaagttggac ttcttcagag gtagtaagac ataggaactt 40140 atagaccaga tattcctctt tctcttatat tttggcatta ggattactga ggttggtgac 40200 taatttggag geetttgage acceatteet etttgaetea gaataggaga geaettggtg 40260 tataggcaag actttgggag gagtttacaa gaaacaggag cagaatttgg ggactttagc 40320 taccactate etettecaca atgaagcaae teatttetgg ggggteaagg accagtgtat 40380 tttgttctgt ttgtgttagt aaatttctct cttctttcct taagtattgg tgttttatag 40440 tgcattaccc tccacttgcc cactttggac tcttcctaag ctaataatct taatttaact 40500 ctctttaaaa aaatttgagt ccttgagaat tggataaaaa gcatttgttt gtcacatctg 40560 tttgagcata gactagtctt atttgccatg atattcccct atctagcaca aggagctacc 40620 tttaataaat atttgtagaa ttgtttaatt gctagtaggt atttgatttt tgtagcctaa 40680 tcagaattct tttccaaaga gaatcttttg gtctccatgt ctgtttgtct aggaagacac 40740 acagacacac acatacacac ggtgcctttt cttgtgtatc tgaatgttta gaaggtcagt 40800 cacacacaca cacagteaca etcacactea etcacteett ttettetgee ttgettteae 40860 tececcatee caattigtta tiggaagtae gettaceaat etetgaeeet tgetteette 40920 agatttactg ttaggccccc cacagacatc atacttttct ctgtggagtg gattccaatc 40980 agatagggct gttccccaaa gtaaaggagt tgacttggtt taattcatcc atttaacaag 41040 tattcatcag ttcctaccca gcttttattt gtatttgggc tgtggagctc aatgacaaga 41100 aatagaggta gaggaagaac tggattttga aactgttcca gttgctatag atatttcatt 41160 ctgtggtgcc tttgaatatg gaaggtctca aactatgtat tttaacttta aagctttaca 41220 tattttaaag attgcacatg gactctggag tcaaatagag ctggatttaa atattcctct 41280 accacttatt agcaatatga ctttggcaag ttaatctttc tgagtatcaa cttcctcatc 41340 tataaatgaa atgacagtat ttatgtccta ggcttgttgt gagaattgaa tcaggtaatc 41400 41460 tctatgaaac actggcacac agtaggtgat tggtaattac ttgctccttt cttttttgtg gtgatttttc ccctctctaa gaaagagcac agtgaaatgg attaaatagt taacagcatt 41520 ttattttgat attcaccgtt ttagtcaatt tacctattga aagaagagtg agtacaaact 41580 ataaagtatc taggcaaaat atcagtagga gccactagct gggaactctg cacaaatgag 41640 gttttagaaa gaacattgga ctgggagtta gaagacttgg attctagcct gtgtcttcat 41700 tttaggaget gtgaeettag gtaagaaate acteagetee teagetgaaa acagaggetg 41760 tggcctctgt tttcatgctg taatacaagg gtacctgccc tgcttacctt aaagggtata 41820 atatgaaaaa tgtgctgaaa atgctttgca aatttatgac ttggtaggcg gaggggttat 41880 41940 tettaagata ticatgagtg gtggtttgct geeectaage aagaaaactg tgeaggeett ttgggctttc tgagcagttc tgaggtatgt gctactggag catcttttga aactgggtgt 42000 gggggtggac agagggacag agcatttgtg ggaatctgac tctttgttat ttgtgtttag 42060 gccacaacga agacctaccc tcaaacagac attttcgtca cgataccccg gattcatctc 42120 ctaggagggt ccgtcatggt accccagatc catctcctag gaaggaccgt catgacaccc 42180 cggatccatc tectaggagg gecegteatg acaeeeerga teetteteee etcagagggg 42240 ctcgtcatga ctcagacaca tctcctccca ggaggatccg tcatgactcc tcagacactt 42300 cacccccaag gagggcccgt catgattctc cagatccttc tcccccaagg aggcctcagc 42360 ataattotto aggtgcatot cotaggagag toogtoatga ttoaccagat coctotocto 42420 ctaggcgagc ccgtcatggt tcctcagata tctcttcccc cagaagggtc cataacaact 42480 cccctgacac atctaggagg actcttggct cttcagacac acagcaactc agaagggccc 42540 gtcatgactc ccctgatttg gctcctaatg tcacttattc cctgcccaga accaaaagtg 42600 gtaaagcccc agaaagagcc tctagcaaga cttctccaca ttggaaggag tcaggagcct 42660 cccatttgtc attcccaaag aacagcaaat atgagtatga ccctgacatc tctcctccac 42720 gaaaaaagca agcaaaatcc cattttggag acaagaagca gcttgattcc aaaggtgagc 42780 42840 atatgactgt ccatgagagg gatgtatgta tccctgggag ctttcttttg gccgtttagt tgatttatta ggtataagaa tggaatttct ttgggaaagt tttgaaaagt gagaggctgg 42900 gtttgggaga gttgaacaat tatggtggca gggaggaagg ttttcatatg tctttttatg 42960 43020 tgctcgctcc accccatata aaagtacaat ttatttgttg cagaagcttt ggaatgtaca gaagtatata aagataaaat gtgacacaaa attctgtcat tcagaggtaa ttattgttag 43080 tgttgtggcc agggtcatct tagtcttttt tggtttgcat tttttatata gttgagctct 43140 ggctgtgtag aacatttgta ttgcatgtgc aatcttgcct gctgtccttt cttaacgtag 43200 tetteeteag gecataaaac atetttatgt tagtataatt tttaatagtg tttaaetaca 43260 aatttaacca ttttcctaat aatgaatgtt tttggttatt tctaagtttt ttcttctgta 43320 attctataat gaacatcctt gtacataaac tgttgtcccc attttggatt atttccttat 43380 ctacttctag atagatttcc tcgaaattca actacttcta tataagtttc ctagaaagct 43440 gagaagttga tgtactgggt cagaagatgt gggcgtttta aagactgtcg atacatattg 43500 cagaatgeee tttgggaggt gaettgtgat gettatacag tegetagaae ttaggeetgt 43560 gcagtgaaat tttttactcc ctcttttgtt cctaggaact attttaattt taaaattaaa 43620 gtactttgtt atcetttagt ccaaggatat cagactatat tccaggtatt tctgactttt 43680 gccacactat ggagagctga ctacaagtta ttttgtcttt ccatgggtgg ggttactgac 43740 atagaggagt gtgtggagat tttacacacc agttacagtc agtggtcact tgggaataga 43800 atgccatatt ctacctgttg gtcttaaaag ttgtttctga ctttgctctt ctcctgtgcc 43860 atccatactt atgtttaggt taatgataat tcttcatagg aaaactaaat aaatatgtac 43920 attagcttgg taagttatct ttttagattc ttccaagggg attaaagaac tctttggcca 43980 ggcatggtgg ctcaagccta taatcccagc actttggagg ccgaggtggg cagatcacct 44040 caggicagga gitcaagacc agcctggcca acatagcgaa accccatcic tactaaaaac 44100 acaaaaatta gctgggcgtg gtggcacaca cctgtaattc cagctacttg ggaggctgag 44160 gcacaataat tgcttgaacc caggaggcgg aggttgcagt gagctgagat catgccactg 44220 cactccagcc tgagactgtc tcaaaaaaaa aaaaataata ataatgtaag gaattcttta 44280 atttctaggt tcttctccca gccataggag atttcatgta agttcttcac ctaggggaca 44340 teagagteae acagattett tgeteetate caggtgaetg ecagaaagea actgatteag 44400 acctttette tecaeggeat aaacaaagte cagggeacca ggattetgat teagatetgt 44460 cacctccacg gaatagacct agacaccgga gctctgattc tgacctctct ccaccaagga 44520 ggagacagag gaccaaatct tetgattetg acetgteece geetegaagg agteageete 44580 ctggaaagaa ggtcaggatt ttcaggagcc atgtccttct tttcgtgtga ctcttctctc 44640 tcagctttat atatgtccca gagaatcaag ccaagaagaa ggatgtagct ctgagaagtg 44700 tagtaaatct tagttaaaag gacctttgga ggtctttcct tctgaaggca aactggctat 44760 aacccatccc agatggactt acagatacca gatttcccaa gtagcttctg cgtttatagc 44820 ctcttaattc tacaatctca ttttaacagg tctagaaaaa cttcctattt tcttaggaat 44880 aaaccgagga ctgtaatttg cagagtgaag tttggagcac aagcattgtg tcaaacggat 44940 cacatacaga aatteteett etgeeactta etgtetgtga gatttgggea agatgettaa 45000 tatctctaaa cctcagtttc tttatctgta aattgtggat aatagtagta cctactgtgt 45060 aaggttgtta tgataattaa gccagtgtaa gtaaaactct tagcacagtg tctgggacaa 45120 agtaagcatc tagtgttagt gatttactag tataaattgg actataggtc tctgtatcca 45180 gagettaagg agaggeactt aaaatatgaa accaetttta gaaateatgt tgtetgagaa 45240 gtcaatggtt tgttttaaat tcatgataag gcttgatgaa ttagccaaaa aaccccaaaa 45300 tccatatgaa ccttgagtaa ttatattgta aagaacattg gtagtagtaa aggaatctta 45360 tttgtaagtg gttaagaaac agaatgatag agcctgtgat gtgcattttt ctccccagtg 45420 cagacttatc aggtaaatct trtctgtaga agactctgag aagactggtc ctggcagggt 45480 agaccagect gttetttace caggaagtga gattettett ttttagggaa aaaagaggte 45540 tetgtttcag etggacetet tggcatttta tatatecatt tagttcatgg acaacttaat 45600 attattccaa tttcgttgct gaaggatatc aagatatact gtgtgcttca ttcgtgggct 45660 gatttgctat cttgatgcta agtggaaatt agcaaaaagt tttcatttgt tagatcttct 45720 gttattacca tgaaatatat ccacaattta aggatettag gtttgettga gtttgtactg 45780 taaatggaat attttatcag tatgggtctc taatggaagg cttagtgctt tatactggtt 45840 tctgatcaga tgacctgaga tagtcttcat gtgtgcagtt tatatactga aaagtcagaa 45900 atacaaatgc gtagccctcc atttaatata ttgttagtgt ttctgcttat tcttaaactt 45960 gatggttttg atgatggttt tcttttatag tttttgaatc ctatggtaat tattgagaat 46020 ataaagctag agttttaggt ttaattattg ctggtcatta gacacaaatg caactaactg 46080 tgtacccatg gaacctactg tcacatcatc tcattaatgt tggatgctcc cttttccgtt 46140 gcataggctg cacacatgta ttctggggct aaaactgggt tggtgttaac tgacatacag 46200 cgagaacagc aggagctcaa ggaacaggat caagaaacca tggcatttga aggtaaaaat 46260 atgaaagtgc agagaccaat ttaggctcat actgtttttt ttttttaatt tagcttattg 46320 tacctgatat tttgaacttt taattgctat caaatttcag ctctggtttt atgcattgtt 46380 gtaatttete agtgaateee agtgettett teettettga aaaatgeeat ttegeeeagg 46440 egeggtgget catgettgta atcccagcae tttggtagge egaggegggt ggateagetg 46500 aggtctgtag ttcaagacca gcctggctaa catgatgaaa ccctgtctct accaaaaata 46560 caaaaaaaaa ctagccaggc atggtgttgc atgcctgtaa tcccagctac tcaggaggct 46620 gagacaggag aatcgcttga acctgggagg tggaggttgc agtgagccaa gatcgcgcca 46680 46740 aggaaaatgc catttettgg geccagtgcc aatatgcacc aagatgttgg taggaactac 46800 tttggtctgg ctgcagaagt tcttatctag cattagaatc ccaagcggtt gatttgatct 46860 cttagaatgt tatttctgat tttgatcctg atatttgagt ataattttcc tttgcagctg 46920 aatttcaata tgctgaaacc gtatttcgag ataagtctgg tcgtaagagg aatttgaaac 46980 tcgaacgttt agagcaaagg aggaaagcag aaaaggactc agagagagat gagctgtatg 47040 cccagtgggg aaaagggtaa gggaaccact gaaagggtaa acaagatggc agtgactgga 47100 acaagtcatt tetetgetet tetgateact caetttetta ttatgeette agagetgtta 47160 teagtaatgg gaaatttggt gtgetgaate ttetteetag gatattgata tatteeaege 47220 ttctagtggg tattctggga attttaccct gctcagtatt tgccctaggg tactagaaag 47280 aggagattgt ccaaacttag cagtatggtc catctcgtgt agaagtggaa atgtcataca 47340 ggatagcaaa cactettggt teetttttge ceaggettge ceagageegg caacagcaae 47400 aaaatgtgga ggatgcaatg aaagagatgc aaaagcctct ggcccgctat attgatgacg 47460 aagatctgga taggatgcta agagaacagg aaagagaggg ggaccctatg gccaacttca 47520 tcaagaagaa taaggccaag gagaacaaga ataaaaaagg tgggacttct gggaatcatc 47580 agctggaggt gacttgtgaa gagagaatca ttaggatgct gatacatagc tatatgcaaa 47640 gaaggatttc ccaaataatt taaattcatt gtatttgtga gtttagattc aactcaattg 47700 gtctttctat ataaaaattt ttccaggcca ggcgcagtgg ctcatgtttg taatcctagc 47760 acttcgggag gccgaggtgg gtggatcacc ttagagttcg agaccagcct ggccaacatg 47820 gtgaaacccc atctctacta aaaatacaaa aaaaaaaaa aaatagccgg tcatggtggt 47880 gcacgcctgt aatcccggct agttgggagg ctaaggcacg agaattgctt gaacccagga 47940 ggcagaggtt gcagtgagct gagatcgtgc cactgtactc cagcctgggc aacagagtga 48000 gactotacta aaaaaaaagg aaaattocac attgccatco agototgaat taaactatgt 48060 cattaactga atacttttt cttactcctc tcattagtga gacctcgcta cagtggtcca 48120 gcacctcctc ccaacagatt taatatctgg cctggatatc gctgggacgg agtggacagg 48180 taagcctggg tatttcttac attttctacc tgactgtaac cttccctaac cactcgtaag 48240 ttgctccaca ctttatttca ttctctgctt taatcacaag gtgaaaaata tgcactttgc 48300 ttgcttcttt ttctgaggtc cacaaatcct atttctcatg cttggaacac tcctccttct 48360 gtttcctttt cataatactt tttaaagctc tggacaaaca cctcaggtgg ttcagataag 48420 acaccetttg ttttggacat tggttacttt taatgatatt ttgtaaggtt tagaggggtt 48480 gagtgatgag ttgtagtctg gagccttcta cctgatatat ctttaaaatg tagcctctga 48540 atctttattc actttatggt tttaggaggc agtcactttt aatgtcttcc agtcctctac 48600 cccacctcat ctgtctacct accaacatct gtacccacgt actctaactt cctgttatga 48660 tggatgaata tttgcttcca tccaaagtca gtttgtatac tcacatatta gatcccatct 48720 cetettgeet actaaaggae attgttttag tatetageae aataattett aaaettttta 48780 atctcaggac ccttttacag tcttttttt tttgagatgg agcctcgccc tgtcgcccag 48840 getggagtge agtggegeag teteggetea etgeaacete tgeeteetgg gtteaagega 48900 tteteetgee etageeteee gagtagetgg gattacegge geeegetgee acaeceaget 48960 aattttttgt atctttaata gagacggagt ttcaccatgt tgccaggctg gtctcaaact 49020 cetgacetea ggtgaceege ceaetteage eteccaaagt getggtatta caggettaca 49080 ggattacagg attacaggtg agccaccatg cccaaccact cttattttt tttgaggcag 49140 agtettgete tgttgeteag getggagtge agtggtgeaa tetecaette eegggtteaa 49200 gcaattctca tgcttcagtg gcctgagtag ctgggattac aggcatgtgt caccatatcc 49260 agctaatttt tgcattttta gtagagacga ggttttgcca cattggccag gctggtcttg 49320 aattettggg eteatatgat tgtetgeete gattteecaa agtgetggga ttacaegett 49380 gagccaccgt gcctggccta cgctcttaaa aattactgat gacctcaaaa agcttttgtt 49440 gatgtggatt atatatattg atatttacca cattataaat taaaactcag acatttaaaa 49500 agtatttatt cattcaaaaa aaaataaact aattatgtta acataattac tgtatattta 49560 aatgaaaaat aattacattt tooaagtgaa aaaacagaag gatggcattg atttacattt 49620 ttgcaaatct cattaatgtc tgacttaata ataggtaact tgactctgta tttgtctgtt 49680 gtgatttgtt cagttgaagt atagaaagaa aatttagcct cacacatagg tagttagaaa 49740 gagaaggcat attatatttc ttaatgttac acaaaaactc aacaagtgct ggtttcttaa aggtgagcta tgtggaacct gaaaccagat caaagaactt tccttactgt tatattaatt 49860 tttttaatac tttgagtgga tcttttaccc atgcatgatt ttataacatc atgcattggt 49920 catttgtaaa atattggttt gctgagttgt tcagaccttc caaatgttga catatttcca 49980 ctatacaata tcagaaaatc acttttgtta acatcacttc cggtcttatc acaaaactct ttaaataatg ggaagttaaa gagttcacag tttttcagaa ttctaattta cacttgaaag 50100 tttaaatgtt atcactggca tttccattgc ttgagctatt tccatttaat agcttaattt 50160 ctctgctgag atttcccatc tgttcattat gagatatttt cctcttcttg aaaatatttg 50220 tgatatgtaa ttggtgcttt gaagtccttc ctgtctgtta attgcaacat tggattcacc 50280 acaggattgg tttctatatt ggcagctttt tcttcagtgt gtattacatt ttcctgttta 50340 tttacctgtc tggtcacttt tttaaattgt tactggacat catgaatgat atactgtaga 50400 gactttgagt tctgttacac tgtattgtca gttgttttcc ttcaggtaaa gctcactttg 50460 tacaataget ttttatagat tecateagat tttgtaceta gagggtette catetttgca 50520 tacagtttaa tttcttactt tacaatctag atgctttttg tttcttttcc ttgccctgtt 50580 gcattagcta gcacttcagt gcagatgttg aatagaagta gtgagagcag acatctttgc 50640 tttgttccta atctcaggaa gaaaacattt agtttttaca acacatttat taaatgtgtt 50700 gtagctgtgt aggttttttg tagatatcct ttatggagtt aaagttgcct tctattcctg 50760 ttttgctgag agttttgttt tcaggaatgt atgttggatt ttgttcaaaa tattttctaa 50820 ttatcctttt ggtttattct ttgctccatg ggttatttag gagtgcatta attccaaata 50880 tttggacttt tctagatatc ttactgctat ttacttataa tttaattcca ttttggtcag 50940 ataatatact gtaatatttt gatcttttga aatttgttgg ccaggcacag tggctcatgc 51000 ctgtaatccc aacattttgg gagcccaagg cagacggatt gcttgagcct aggagtttga 51060 gaccagcetg ggcaacatgg caaaaccetg tetetacaaa aaatacaaa aattagtegg 51120 gcatggtggc acacgcctat agtcccagct actgtggagg ctgaggtggg aggatcactg 51180 agcccaggga ggtcgaggct gcaatgtgct gtgattgcac cactgcactc cagcctggat 51240 gacagagtga gaccatgtat caaaaaacaa taataaaaat gaaatttgtt aaggtgtgtt 51300 ttatggccca gtgcatagtc tatcttctga atgtttcctt tgcacttgaa gagaacgtat 51360 attetgtage tatataaggt agtgttttat aaaagtcagt gaggtcaagg tgtttagate 51420 ttagatogoc tgtattctgg gttttttgtg tttgtatttt tctatcagtt actatcaatt 51480 gtggattttt tgttttagct ggtttatttt gtttttcaac tctaaaattt ccatttaata 51540 gettacattt etetgetgag attteceate tgtteattat gagacatttt eetettettg 51600 aaaatattta tgatatgtaa ttagtgcttt gaagtcctgt ctgctaattg caacattgga 51660 ttcaccacag gattggtttc tattgacagc tttttcttca gtgtgtatta cattttcctg 51720 tttatttacc tgtctggtca ctttttaaaa ttgttactac gcatcatgaa tgatacactg 51780 tagagacttt gagttetgtt acactgtatt ectettaagt gtgttagttt ttattetage 51840 aggtagttaa catagctgaa ctccaaactg tctcctttgc agtggaccgc agctacaatc 51900 tttgctcagt tcttttagtt tctagctgcc atttttttaa ttggcctgat ggtattttct 51960 ctgcacatgt gtcatttaac agttagccaa ggatttgact agggtttgta tgtagatttt 52020 gaggttcatc tcttttgtag ttccttctct tccaagattt cccccctaat ttcctagctg 52080 ttetgeccae tttgeactaa tteeteaage cagtaageet gtggetttet geetteatga 52140 gccatgctgt ttgggaagtt gccctccagc aaatctcttt tcacatatag acttcatcca 52200 52260 ctaggtttta tagttgctaa ctgaggatag gttagtctgt tcgggttact ctgcaatgtc 52320 tagaatctgt ctccccacct tatatgggcc taaggcgttg tcttctgtcc ctcggggtgc 52380 cgtcaaaatc caacagccag gtgtggtggc gtgtgtctgt agtaccagct atttgggagg ctgaggcagg aagatcgctt gaacccagga gtttaagtcc aggctaggca acatagtgag 52500 accccaactc cagaataaaa aaatttaagg ctcttctttc tgatattggc agatatctat 52560 aagttgactg tagttcctca tcttggcaga tatctttagg gtagctgtgg ttacaggcta 52620 gettactagt teegtttgca gtteactgta tgtaggettt ttggtagaag gaggattttt 52680 cagaacactc atttgccata catacagcca gaagtagatc tttttatagc acaaccctac 52740 agatgttccc tgctaccgag tttttgtttt ttgtttttta atttttggac ccaaaactta 52800 gaatteteee tgacetagtt ttttttacta gtatttaatt tgtetteatt ttteteagtt 52860 gettttttee acttettgtt etgattttat ectagattte tretettatt tecetttgte 52920 accettgett tetttttgtt atteatettt eateatettt tetagttttg tetetttteg 52980 geetgetgea agggaatatt teeggaacag atacatagta tetgttggaa aaaceeataa 53040 gataattacc cagectetet taattgaaag agaaacgggg cegggtgegg tggeteatge 53100 ctataatctc agcactttgg gaggccgagg cgggcagatc acgaggtcag gagattgaga 53160 ccatcctggc taacatggtg aaacctcgtc tctactaaaa aaaatacaaa aaattagctg ggcgtggtgg cgggcgcctg tagtcccagc tgctcggaag gctgaggcag gagaatggtg 53280 tgaacccggg aagcggaget tgcagtgage cgagatcgtg ccactgcact ccagectggg 53340 caacagagca agactccgtc tcaaaaaaaa gagaaactga ggcccaataa ataagcagtt 53400 tgcctagagt catgcaattt ccctgagaaa gctggaatta gaactctgcg ttcctgattc 53460 tctggtccaa agctctttcc actgtgagtt ctcctgcaat ttgttttctg attctgctta 53520 ggatttggtg tttgttattc atatgtcctt tgtattatca tattagtgta actctcttaa 53580 gaccttattt ccaaggtaaa aaacagtggt ttccttggtg ctttggaata ccatccatgc 53640 ttctaaggtt ggagaggatg ccatttataa taagcttccc ttctttttt tttgagacgg 53700 aatttegete ttgttgetea ggetggagtg caaaatggea egatettgge teaetggaae 53760 etecgeetee taggtteaag caattetett geeteageet eeegagtage tgggattaca 53820 ggcgtgagca ccacgcccag ctaatttttg tatttttagt agagacaggg tttcaccatg 53880 ttggccaggc tggtctcgaa cttctcatct caggtgattc acctgcctcg gcctcccaaa 53940 gtgctgggat tacaggcgtg agccaccatg tccggccaag cttcccttct taaagccctc 54000 tgttactcac tccactcatc ccttaaggga aagtcttagc atacatgtta taagtgtaag 54060 cagctaggta gtaggtacta gggattccat gattaaagag agatagcccc tgagcccagg 54120 agetcaettt caatetagaa tagaagacag acagtttcaa egetgtttgg ttagtgttae 54180 tatagaagat tttcaagatg ttttgggagc acaaaggaag agtaagttga gccttaggag 54240 gatgtgagtg atcaggaagt gcttcctaac ggatgaaatg tgggagctga gttttaaggg 54300 atgttggtaa ccagccaaga taagaaggaa aggaaggata ttaaaggaag agggtcctat 54360 atgtgcagag tcataaggct atgagacacc atggtgttac caggtggtgg gggtccctaa 54420 gtaatttgct gttgttggat agcataaagc gtgagatgga tgagagaggt tggcagaccg 54480 tgatcacaga aggeeetgga ageetatetg aggagettgg tetteaceet agaggtaaag 54540 gggagacacg gaaggattaa aaacagctct gcattttaga tagacaaatc cattatagca 54600 gtaatatgaa ggatttgaaa ggtacaagat tggaagtaga acagatacaa ggcttttgca 54660 gtagctcagg ctgaaagtaa tgagtgtctg aactacgact tgcaggcagt ggtagtaagg 54720 atggttagta agagaatagg aagtggggat gtggtcaggg gtgagctggt gggacctgtt 54780 tgctgatttg gggaagagga aggaggagtc attggatttg gcaacaagga atgtcagtga 54840 tgacctgaaa gggctagttc cgttgtgtag tgaaacaatg gccaggttct aatgtattaa 54900 ggagtgaatg aaaagtgagg aaacaaatag tgaatacagg ctttttaaga agtttagata 54960 agaagaccaa gagaatgcat ggtaattaaa gggatttgag gtccactcac tacctccttg 55020 aaattcaccc ctgtattgtt ttccatgaca ccctactcct ggttcttttc tctgatcatt 55080 cttggccacc tttgcaaact cctcttcctc tgtgcacctc ttaagtcttt cccagggctc 55140 catccataat ttttagctgt tctcactcta tgtgctccct ctggctgatt cttacctagt 55200 catgttttca actatgacct atatgtacat gatttccaaa tcagtatttg catcttggtc 55260 tggtgtattt agctgtttgt tggatttctc tattgattta gacttgagag atttcaaatg 55320 cattgtattc aaagctgaac tcatcagctt ctactgtaag cctgctccta ctcttgtgct 55380 ctctaacttg cctcctcctt ctttgtcctt gtgtacctaa tcaattagtg ctgctaatta 55440 gtettactaa ttttgeetee tgtgtettet etetteegte eetetttate attgeettea 55500 teatetgttg cetggaceat tgeagtgatt tteetgeece agateceete cagagtgate 55560 tetttgaaat geagtttaag ttettgettt aaacceateg tttetggatg aaatetaage 55620 tttttaccat ggcctacgca gctcattatg cattggcctc tgcgcctttc caactttgac 55680 teatggetgt teeettigte atactteagg tteeageeat accagttige ettiggtitg 55740 ctgcacatac caggccactt cttatttccg tgcctttgtt cttgttgctc attctgttct 55800 gaaatgacct ccagaccctt tctggccctt ccatccccag tgctgtagtt aacacagagc 55860 ctttactgat cattettgcc caaccetcat gtcacctttt tatcatacct cccccaaget 55920 gattaagata cccattetgt ttecatgaca ecccatgegt atttetacea gagtttatge 55980 tgttctttta atttatttgt ttaaatgtct ctctcttcca ctagtctggg agttcatcag 56040 gacaggtget gtgtcatact cattttcatg tagtgtctac catggtacct agtatataat 56100 gaaaattcaa taaatgtttg tgtaatgaat ggataaaata taagatgtgg acatcagctg 56160 agagagaacc aggcttttag agtggcaaac gtttgaaata gctgtcagag tgggggaagg 56220 gtgtgaacaa ggactaagaa aaggatgaat gatatatttt gtccctttga ttctattgca 56280 56340 ttgagacaga gtctctgtca cccaggctgg agtgcagtgg cacgatctcc gctcactgca 56400 acctctgctg tccaggttca agcgattctc ctgcgtcagc ctcccgaata gctggattac 56460 aggcacctgc cactgcacct ggctaatttt tgtattgtta gtagagacag ggtttcacca 56520 tattaggcag gctggtcttg aatgcctgac ctcgtgatct accegcettg gcctcccaaa 56580 gtgctgggat tacaggcgtg agccgccgtg cccggccatg cctaaaatat tttcatatga 56640 ctccttactt tccccccttt tcattatatt gtgaactctt ccctttcttt tgaaacaaat 56700 geceetttea gggttetage tgaatagtat gtetettttg attgeagate caatggattt 56760 gaacagaagc gctttgccag gcttgccagc aagaaggcag tggaggaact tgcctacaaa 56820 tggagtgttg aggatatgta actttcctga ggctgtgggg gtggctgggc tgtggtagtg 56880 ggcataggca gcgagatatc cagtggtaac agttgtctgt gctaataatt ggagcccaca 56940 cagaccagca acttgttgaa tgccagtttt gaccacagaa gaatattcga gacctgatgt 57000 ttggactgag gtacctgtac ttcttgggtg tgacagcacc ggctgttgct ggctttcaga 57060 ggaagcattg atttctcatt gaccagggtt tgttcttggt agggtttttc tttttctttt 57120 ttaaataaac atgtatttat ttttttaaaa ttatcttctt aactgggtat tctgttttgg 57180 gaagaataca ggctaatatt gaacctgtgg ggatttgggg ggtggtggtt gaatttttca 57240 ctaatctaga aagcagtgtg agtaaaaact ttcttagtga tagatccttc ctctgagaaa 57300 acaggaatta gtactaaact agactcagga atagacacac agatatttgg agacatggtg 57360 tatgataaag atagtgtcac aagttagtag ggaagagatg gataatagtg ctcagaaaat 57420 tggcttatta tatggacaaa aataaagttg aaccctcata ccatataaaa caaaaatccc 57480 aaagtgatta aagacctaaa tgaaagataa cgtgatatac agctagtagg aacaaatggc 57540 aaatgttttt gtgccttggg gtaaagataa atttcttaaa taagatccca aagcacaatg 57600 cataagattt gatagctttg attactttgt aattaaaggt ttctatttag caaagcatcc 57660 catagtcaaa gctaaagatg gatacggatt aggagaaaat atttgcagtg tctaaaactg 57720 acaaggattg catatacaag ggatagaata tagaaagagc ttctgcaaat catgaagaaa 57780 aagacagatg aaataaaaat atgcaaaaat atgaataggt aaaatctaaa gagaaaacca 57840 gagtggctca taagtatatt acctcactag taattacaga tacgctaatt aaaacactga 57900 gtttctacct tacatcttag tttggcaaaa ataagcaaga gactgatctg atggggaatc 57960 58020 tittttttaa aaagacagag tottactotg toatcoaggo tggagtgcag tggtgcotot 58080 geeteccagg ttcaagcaat ceteccacet cageeteetg agtagecagg actgtaggea 58140 tgcgctacac aatttttgtt tttttagtag agatggggtt tcaccatgtt ggccaggctg atctcgtact cctgacctca ggtgatccgc ccgccttgtc ctcccaaagt gctgggatta 58260 caggcatgaa ccactgtgcc cggctacatg gaatatttca gctggtgtat tcattttgga 58320 gaacaaatga atgaaactta ctgaaatcaa gtaataccta gggagcgata ttgcagtttt 58380 taatagtgtg gctctggagc tatactgcct gaatttgaat cccagctatg tcgtttgcta 58440 gctgtgtaac ctttggtaag ccagttaact tctctatgcc ttagtttttt cgtctgtgaa 58500 atagacataa tagtacctac ctcataggtt tattgtaagc ttagaacaat gcctggcaca 58560 cagtagtgtc acagaattat tagctgttat tattatcatt gtcatcatta tcatcaagta 58620 gggcagccag cttccacgat ggcccctaat gatctctgcc ctctggtata taaacccttg 58680 tatagteece teccacaata aataaggttg acetgtgtaa ecaataggat gtaetagaaa 58740 tgtgtgactt acgaaggtag gtcataaaag gtattaaaat atctgccttg tgctatcttg 58800 gatcettget etggaggatg ecagetteca tateatgagg acacteaage agecetetgg 58860 agaggcccag gtagagaagc tetgaggcct etcaccaaca gccagcacca aattgcette 58920 tgtaggagtg aatcaccttg gaagtgcatc cgccagctct actcaagccc tccctcaggc 58980 ttgcagccct gatcgacctc gtgagagatc ctgacccaga acatccagct ccagattctt 59040 gaaccaaaga aactotgaga taataaatgt ttagtattta tttatttatt tgaggtggag 59100 tettactetg ttteccagge tggagtgeag tggtgtgate ttggeteace acaacetetg 59160 cetecegggt teaageaatt etectgeete agecaeeega gtagetggga etaeaggtge 59220 ccatgcccag ctaatttttg tatttttagt agaggtgggg tttcactatg ttggccaggc 59280 tggtcttgaa ctcctgacct cgtgatctgc ccacctcggc ctcccaaagt gctgggatta 59340 caggcatgag ccactgcgcc tggccatgtt tagtatttt taaaaactgc tttattgaga 59400 tataatttac atactacaca attcacccac ttaaggtgta tgattcagtg gcttgtaata 59460 tatcacagag ttatgcaacc atcaccacat ttaattttaa aacatttta tcatcttgtg 59520 ggtacaagaa accttgtacc cattagcagt cactccccac tttcccctaa cttctccagc 59580 cttaggcaaa cactaatcta ctttctgcct gtatagtttg cccgttctgg actttcatat 59640 attaataaga tatgagtgag actgtcatat aatatttggc cttttgtgtc tggctttttg 59700 tgcttagcat aatgttttca aggttcatcc atgttgtaat atgtatcagc cctacattcc 59760 tttttaaggc tgaataatat teeettgtge ggatatacea cattttattt atgeateatt 59820 tgatgggcat tcgagttgtt tccactgttt gggtattatg aataatgctg ctgtgaacaa 59880 ttcatgtata agtttttgta tggatgtata ttttcttttt tatattccta ggggtggata 59940 tattcctagg agtgaaattg ctgggtcata tgtaactcca tgtttaactt tttgaggaac 60000 tgccaaactt attccaaaga aatgtatgcg cgttccaatt tctccacatg cttgccaaca 60060 cttattattt gtctttttga ttatagccat cctgatgggt gggaggtggt atatcattat 60120 ggttttgatt tgcattttcc tggtggctag tgatgttgag catctttata tatcttttgg 60180 agaaatottt attoaaatoo tttgoccatt tttcatttgg gttattggtt atatatacac 60240 atacacagge actetettae gtaaagggtt etttatatat atettggtta taagteettt 60300 actagataca tgatttgcaa atacttttct cattctatgg gttgttattg ttttaagctg 60360 ctcaagcatt tagggaagga agtttgcatt tagggtaggt aagcaacagc agttacagtt 60420 ataaccataa caattgttat acagcaacag ataactaata ctttatgtac atacttcaaa 60480 gtagttccac tcctggctat atccttcgga gaaatttgca taaatccttg aggagtagat 60540 acaaggatgt ttttctatgt atagtttggg tggcaagaat ttggaaaaaa cttagatgtc 60600 catcactaag gaaattgata agtaaaatgt ggtatatgca tataatggag ttttttttt 60660 aagtcaaatg caagctgtta ggaatttcgt gaaatggtag acttcaagtg aaaaaataag 60720 gaacagtgaa atttaaagca aaaatcagct atataaacac atgaagtgat attattttat 60780 aaggaggata tacaccttaa tcagtagaat aggtttgtgg gagggaacag aatgagacta 60840 gaatggagaa tgaagcgggg aaagggaagc aaagagggct ttgcatggat gaaagtgatc 60900 gtgtatcatg aactcaggcc tgtgataact cagttctgtg cacctgaagc cctaagtgca 60960 gctccagaag caaggtctgg tttcatggaa ttgacattta gtacccatat tagttagggt 61020 agactaaact gctaaagcag actccaaata gacatgtgtt tcccccctgc tcactcgtgt 61080 aacatgcagg tcgtttcagg ttgagaaagt aggagtgaga tactctatga agttgtttag 61140 ggatcaggct gatgccagct tcactatggc ttccaaggtt gtgttgggca ttaccatttt 61200 agtgagttga gcagaacgtg aaggattgct tggcagatgt taccggctag ctctagaagc 61260 ggcacacact totactcata ttotgttggt aagaacctag toacaaggot coctottaat 61320 gcaaaggagc ccgaggcata taatatgcat caggaagaag ggataaatgg atgttgttgg 61380 acacataaca tattatettt gecacattat ataettetea gaettgtaaa gaaaggetgt 61440 ccatccccca gccatttgag acatacatag atttttaaat agttttgaga cctgaaaatc 61500 ccgaagggag tatcagttgg ggtcactacc aagttaggga tgtctcttcc ctaactctgg 61560 ccagtgattg tcagagaagg gcttaggtag ggagataaaa tgtaaactgg aattgtgtcg 61620 agaatcagca tttatgagat ggaagtactt tatttatttt tacagctcag atcttgctgt 61680 gttgcccagg ctggagtgct atggcatgct tgaaacttgt gggctgtgat cctactgtct 61740 cgccttccca aggtggcaga ggaggcattc aactcctagc tcattgtcac accccttctg 61800 cacagctagg ttttgtttct gtatgggttc gggttttaac ttcatttttg tgggaccctc 61860 acgctgtttc ttaggaacac ctcactctta agaggctcag aggctttaga aatctgaaat 61920 cacttttttt cccttaacaa aggaatgtat tatttattta tttattcatt ttttatttt 61980 ttgagaccga gtctcgctct gtcgcttagg ctggagtgca gtggcacgat ctcggctcac 62040 tgcgacctcc acctcctggg ttcaagcaat tctgcctcag tcttccgagt agctgagatt 62100 acaggcatgc gcaggaatgt attatttatt tttaagcaga gattaaggtg tagggaaagc 62160 agttagattc tgtttcaggt gagctctatg tttagtaggc attagtgaac atttaaaaac 62220 tecacecet ccaattete tgeetgtaag tgtgagaaca cageacatet tgtagggeag 62280 agatcgcaag cctgtccagt ccctagctga ctgtcatttc ctaggctgtc tactagaggg 62340 cagtgtgata tgccttttct agactggcga aagcggagcc ctgggtctat acacacttaa 62400 taatagtagg ccttagatct agaacataat cctgtttcca atatggaaaa gattttcaag 62460 agagagacct agtatttagg ttttgaccag aatctccctt acttgggctt tggaaacctt 62520 tetetacgtg gaagattttt ttttteettt taatcaaate teetttettg egeeteetee 62580 actttcaagt ttagacttaa gaagccatga gcaatgtgaa aaacctctga attgtacatt 62640 ttaaaagggt gaactttatg gtatgataat tatatctgaa tttaaaaaata ttaaaacagg 62700 ccgggaatgg tagtgcattc ctgtaattcc agctactcaa gaggtcaagt gggaggatca 62760 cttaagcaca ggagttcagg accagcctgg acaatgagac cccatctcaa tgaaataaat 62820 aaaatttaaa aaatgtaaaa acaacaaaaa agaagaatca ctgagcagac actctggctc 62880 agatagaata taatagtagt aatagacgta gtaatagact ggaatgactc agtctctcct 62940 ttatctctcc tgaatgattc aaacttgatg gtgttgatct tggccttata cagcttcacc 63000 ctttcagaaa acaagggtac gtgggcgatc ttggtggtag gttgatactc aggcagtacc 63060 tgtgaaccca cccccttggg aggggacaga gagcagtctg ctgaaaaagg agtcagtctt 63120 tecetecgea tateacatee agegeeetet gteagetaag gaattacaaa gtgtgtgaet 63180 ttatcctgtc acacgtaaaa atgcaatctc tagtgcttag taaacagggc ctgttttctt 63240 tattttcctt ttagtaggag aggaagcaat tgtgcagaga ggttaacttg ctcaaaatcg 63300 ctctgagttg ggaaagagtc agaatttaaa caacagattc ctctccctgc agttgtcacc 63360 cccacctatc ttcactccag tagcaaggta agaggtgagg gggcagtcca agggactgtt

teetgteeag ageagttett accaggggtt eteatageet etgeaaggag gteetagtgt 63480 acttgaaget gagtteecca gteetggaag aactgettge tggtagttte agtttggaae 63540 teggetttga agateetaac caagtgtgtt agaggggcae gtgeeettga etegtgtgtg 63600 tgtgtgtgtg tgtgtgtgt tgtgtgtgtt ttgagacagt ttcattctgt cacccaggct 63660 ggagtacagt ggcgcgatct cagctcactg taacctctgc ctcctgggtt caggcaattc 63720 ttgtgcctca gcctccccag tagctgggat tacagatgtg cgccaccaca cccagctgat 63780 ttttgtattt tcagtagaga ccgggtttca ccatgttggt caggctggtc tcaaactcct 63840 gatctcaggt gatccgccca ccttgcctcc caaagtgttg ggattatagg cgtgagccac 63900 tgcgcctggc cccttgtctc tttttgccag gggcttggga ggtggtagac aagacctctg 63960 ggaagagagg aatgcctgtc tgggaaaaaa attattgttt taattgctct ctttcattaa 64020 gtacttactg tgtgtcaaat gtgtatgttc agtgcgtact tacattacct ctgttgtcag 64080 ggagagatca gtctgtgaat ggttgtagat tagggagagc cacatttctg ggtctcccaa 64140 gaaaaggggg gttgggatat cccagcagga taaactcttc cttgttttcc cccatacatc 64200 ctgaagttat aggacettca tgctgattac ttgttgacag agagettggg cactttacce 64260 tggtcactgt gtccccatca aatttgacag tgctgttgcc acccaggatg gccgtctcct 64320 getttggcca getcagetet teatgeagat taagtagtgg getgecagee gggggcagtt 64380 teettetgea catgetggat atgtttgetg eeeggggtaa aaataatget geaggatgga 64440 gccatgccaa ggggcttcag gtggtattta acatctcctg gggctatttc ctcctgggct 64500 tecaactget gaaaageage tecettetge tgeteeece agtgggaagt teagtttgtg 64560 gggggttgag ggggggcgag ggggggtcct tctgaccttc ccttcattaa ttgggcttag 64620 taggggaagt cagtggtggt cagtctccta gagtgagagg tcatcaaaaa gtagtccatg 64680 ttacctccta tcaagttact taacttctct gagccacagt ttccttattt atttatttt 64740 tgttttttt tttgatacag agtctcgctc ttgtccctca ggctggagtg cagtggcgca 64800 atctcagete actgcaacet eegecteeeg ggttcaagtg atteteetge eteageetee 64860 tgagtagctg ggattacagg ctcctgccac catgcccggc taatttttgt attttaata 64920 gagacggggt ttcaccatgt tggccaggct ggtctcgaac tcctgacctc aggtgatcca 64980 cccaccttgg cctcccaaag tgctgggatt acaggcgtga gccactgcac ctggccacac 65040 aattteetta tttgtaaaat eagggtaata eeteettte tggttattga gaggatetga 65100 aataaagtta totagoatag tgtotggoat gtagtaggtg ottaataaat agtttottaa 65160 aatagatact taaagagcat gtctgctgcc tcagtggcac atgtcccagt ctctgttgat 65220 cettetettg tettatteet ggetttacet gaacaccagg gteacagtte tetggetgtg 65280 tttggagagc cagtgtctct tgctgggtgg gattgaggga tgtactattt gaagaagagt 65340 agtcaaacag gtggggatct tctgtccct ggagaggggg tgtctagagg cgggggagaa 65400 gtgattggct tgttccagtg attcttgcct gtctcatggt agccttctat tacccattgc 65460 cccttgtcag gggagaggtg ggtgctggtg gtggtgtcca gacaggaccc agtttgaatt 65520 tatttgaagc tggggacata agaactagtg gtgggggtgg ggaggggtga ggagttctct 65580 gcatttaaca tttaagggca tgtggaattt caaaagcagt tttcaccagc atttcatgtt 65640 tgtttggttg tttcttttgc ctttgagcat agtgctggtt gggggcaggg tggcttatga 65700 tgaagatagt cagtggtgga ctcctgcata ggtgggtgga actccatata ggaaaacaca 65760 ttaccgctgg gcttagtgcg gttgctacgg tgtctgtgtc tcctaagggg caggaaaaag 65820 aacagtetet aggageaaaa gaggaagaga attgagteag gggttttgtt etetetetge 65880 ttccaaagct gcaaggctgt gtccatgaga ccttgaggaa gcccctccag ttcctcagtg 65940 ggagggaaga aggttggccc tctgcactgg ctgtgttttg acagaagtaa aactcttgac 66000 tcagccttca aagttcaagg gtgggatatt gggagaggat gagcagcttt ttggcttgtt 66060 aagaaagtca cgtttttggc cagtataaag tggaggaggc agagtggggt gaggtgtgtg 66120 ggagtcctgt gggatggaga aagcagtctg ccaagggcca tgttacctgt gggtgatgca 66180 gagaggctgt ggtcataatg gggagcaggt agtgagaact ctgtggggag ggctgtgttt 66240 gaaccactga ggtctgagca gggcccaggg caggaagcgt cctgtgttct ctgcctatcc 66300 accetgeatt aaagggaggg aageagagag caggagetet ggggacaggg aggggagtga 66360 gagggggatg ccaggtagtg ggtgactaga ggactettat ccacagtete agagcacaca 66420 gagatggctg aaggatgcca ctttaagtga taccttctgg tcatgctggc agtagcttct 66480 gtgctcagca ccatcttctg tcccccagct tttgaggggg cacctatgct ttggcaaatg 66540 gactttggtt ctgaggtttg gtgtcttagg ttgcctcaag cctgcactgg ttttgggaga 66600 ggaggtagag gcagctgtgt ccccaacaat agatgactgt ggccagcagc taagggaagg 66660 66720 66780 tgtgtgccca agctctggcc ctgcagatgt ctatcttttc ctgccctcat ctctgcttcc cacacccacc ccccacccac gtgcacacac caggtgttgt cctgagacct gagacagagg 66840 ggtgagctgc atcttgtcag ctgtgtagat ctgccagtag ctctacagtg gctccctttc 66900 agaatctgga atcacaaaat aagaatctca gagttggaag ataccttaaa gggcttctag 66960 ttattccacc ttccccatac caattagtgt gtaagtattt ccatcagttc actagctcaa 67020 ctgctgttcc cctctagtac catggaaatg cagtgttaat tcgattaatc ctagaatcaa 67080 agttggaaag agcettegae aagagetaat ceteacaete acceeagtge eaggateeee 67140 tggcaaaaca catttatgtg atgtgccgtt ccactcacat ttgaacatat gtattccatt 67200 cctgagcaac tctagctttt ttccagttgt ctttccccat ggcttcacca tttgtctgaa 67260 ttatccaact tggggcttat ataaaaaaaa gactaactcc tttctatctg acacaatttt 67320 agatgtgttg ggataaattt ttctccctgt gccctacctg tttcccttcc tgggcccaca 67380 gcattaagct aataggagga gagtcttgca ttaaaactta tacaggaaag gaagcagaca 67440 atcttttaca taataaggta gtaggaaatt aatcttcata cacggagttt tatttttgaa 67500 attattatat tcttatttgt ataaatgtat ggaatagagg tgcaattttg ttccatgcac 67560 agcttgtgta gtggtgaatt cagggctttt aggatatcca tcacttgcat aatgtacata 67620 aggcccatga agtaatttct catcattcac cccctccca ccctctcacc cttccaagtc 67680 tocattgtct atcattccat getettatgt ccatgtgtac acattattat tatttttga 67740 gacagagtee caettagtea eccaggetgg agtgeagtgg egegatetea geteaetgea 67800 coctcoacet cotgggttca agogattete ttgcctcage etcccgagta getgggatta 67860 caagcaaaca ccaccatgcc tggctaattt ttttttttt taatactttt attagagaca 67920 gggttttgcg ttgttggcct ggctggtctt gaactcctga cctcaggtga cctacctgcc 67980 teagectece aaagtgttgg gattacaggt atgagecace gtgcccaggg tgtacgcatt 68040 atttagcccc cacttacaag agaggacatg caatatatgt ctttctgtgt ctgatttggt 68100 ttcacttaag ataatggctt ccagttccat ccatgttgct gcaaaagacc atgatttcat 68160 tettttttta tggccgaata gtattccatt gtgtatatat actacagttt etttatccaa 68220 tcatccattg atggccactt agattgaggt tgattctata tttttgctat tgtgaacagt 68280 gctgtgatag acatatgagc acacacagaa ggtttaatgg tgttcatgga cacctcccct 68340 agagggeete ateettetee tetaceetea gtteaacage agaaccaage gtgacaacet 68400 gtgccagagg ctgacaccag agggagaggc aggaggaaaa ggatgcagga ccctagaaga 68460 gccataatgt tgccattaga agaaagctgc tgggcccatc tgactttttt tttcccccag 68520 tttcttcaac catccttttt aatgcatgat ttcgagtctc acactgactt ctctgaactc 68580 attccagttg gagtgagctg ggccataatg ttcaaagtgt gctgatcaga gtacaatggg 68640 tatcacttcc ctcagtgtag acattatgcg tgtgtgtatg tgtgtgttta tatgtatagt 68700 gtaacctcaa actcctgggc tcaagagatc cttcttgcct cagcctcctg agcagctgag 68760 actataggtg tgcaccacca tgcctggcta aattttaaat attttgtaga gatgggggtc 68820 acgctatgtt gcccaggctg gtctcgaact cctgggctcc ctctcacctc agcctgccaa 68880 aatgttggga ttacaggcat gagccaccac actcagctag atattctatt taattaacta 68940 attaattaat ttttttagtg ggttaaggag tggaacgttt aatagacaga agaaagcaga 69000 gaggagagca gttccttgtg aaggagagag agatgtctga aaaaaggcct agatagatat 69060 totattttaa toagtgtatt taagattgga ttagotttot ttttttttt tttttttt 69120 tttttttttt ttttttgaga tggagtctca ctcttgttgc ccaggctgga gtgcaatggc 69180 acaatotoag otoactgoaa octotgooto ocaggitoaa gooattatoi tggotoagoo 69240 ccctgtgtag ctgggattac aggcacctac caccacgcct ggctaatttt tatattttt 69300 agtagagatg gggtttcacc atgttggcca ggctggtttc aaactcctga cctcaggtga 69360 tecaceegee teggetteee aaagtgetgg gattacaggt gtgagetaee atggetggee 69420 tggattaget tteatggtga ecacateaea ecaeggatte ecaetgeaet ategteagaa 69480 getecegtgt etectttaca catategtga gaaaggagat ggagecatgt tgeatecate 69540 tetttatttg tgeagttggt gttttggaet eagtatagtt acetttaace tetagaaate 69600 ctactttctt gttcttctat gctttctcag catgaaagtg gtaggatgct aagctttgtt 69660 ctggtttttc ttggtgcagg agaggaggag gccggaatgg gggttacaac ttgggcccgg 69720 ttatactcct gaggctcaga tgagcccggc caacatggcc tcatgctgga gaggacttag 69780 cttctgagtc aatttgaaaa gtcttttaat atgaattaaa gagaaagtgt gggctggggg 69840 cagtggctca tgcatgtgat cctagtgctt tgggaggctg aggtgggtag gttgcttgag 69900 cccaggagtt tgagaccagc ctgggcaaca tagtgagacc ttgtctctac aataagttaa 69960 aaaattagct gggcatggtg gcacccacct gtagccccag ctacttgaga ggctgaggtg 70020 gaaggatcac ttgagtctgg gaggttgagg ctgcagtgag ctgtgattga gccactgcac 70080 tccagccagg gtgacagagt aagactctgt ctcaaaaaaa aaaaagttgt tggcaaagac 70140 aaaactacta ttcaagcact catctgaggt gctaggagac ccccgggctt tgtggcaggg 70200 gctagaaggg ccctgtctgc ccagttatac ttaggaactg agaatttgaa ctcttgctac 70260 tgctcccagg acaggatctg cttaccaatt cagccatttt ctgagttttc atggcacttt 70320 gaggacagca tttatcatac tattttgtgc gttgggagtt cctatggcca gaaactattt 70380 cttattcatt ttcaaatccc tagctccaaa gccaaggtat tacaccccag aactaatagc 70440 tatcatttat taagtactaa cttaggcact aaaattaggt actctccata tattaatctc 70500 acaacaaccc aacaaggtta atgctaatat ttccatgttg taggtgaaga aactgaggct 70560 aaagaccaca gctctaccaa agcctctgct ctttcttcaa atgaatgagt gagtcggggg 70620 eggttgetet gagtgagagt gggccagagt gggttcaggg cattcaggag ccaccacagc 70680 teattegtgg aggtgtetaa teagetatge taattgattg tegtgtetge aatateagat 70740 gcatgcttaa ttagcacatg aactctcctg tcagatattc ctggaggggc tctgccagcc 70800 aacctaggcc cagccacagg agcctgctgc tttcttggaa acagggtggg gaagcatgat 70860 gatcccagta ttgacaagga tcccctgaga acaggaaggt ccactgcttt gtcgtgtggg 70920 aagcagatte aggatgaage cetgtetaca agatgtgtee agteteetee geetegagge 70980 cettggttca tcgacctctt ccctacagcc tttggacttt gcaccactct ttgaggcctc 71040 tgtgcttttt tccaagctcc tgcttctgcg ctggtcttcc tctccctagc aaatccttat 71100 teaccettaa gggtecaget caaatgteae tteetttgtg gagtteecee tggeeceegt 71160 gctaccegca gagtggcaga atcaaatgct teetetteag acttgeteet attgtacttg 71220 tacctacctg actctaatgt gagtctcttc aaattacagt gtttttgacg tgttttctc 71280 ccccggccag acttagggct tattcaaggc agagaccaca gtcttcagca tccggcacaa 71340 agcccggcct gtacaagaca ctcagtacat ttaatttgtt gaattaaact gaatgctagg 71400 ttgaggttcc actgcaggta agaactgggc aagtgtaaac ttccagaact cagcagctat 71460 ttattagtga tatgcagatg taggtagggc atctttgaaa tcttcccaag gattctgtga 71520 teettatttt teetttteae aataateete teetaettgg gaaaaagggg gataaaateg 71580 cactttggcc ccagcctggg gagaatcttg gcattaggct ggggggccat ggtgggagga 71640 agcatgggac tggggcctaa aggccatcaa ccagactgca agctgcctga gtgcaggatg 71700 tgacttcccc tccctcccac acatatggcc attgcttcac ctggagtgac ttgggactgg 71760 ggaatcaggg gtgggcagca gtgcaggaaa acccatccgc accagcctgg ggctccctct 71820 tetcactace teatgaggee etgtggagtg tggactgttg etgetgteet gateeeceaa 71880 atgccataac tgctgacttc tgatgtaaat agtgtacatt tgttttttac tttgcagcta 71940 atttgcatta acttctctga atgacagaca tataggaatt ccctgatttc tatgacctca 72000 ettecacace acaaaaaace acagtggtee etatacetet gtacteaggg acteceaace 72060 caggtgggca gataccaggg ggtttctgag gagccctgca tcaagcaggc accagcccag 72120 gaggaagcga tccaggaatc ccactacccc ggagcccact gctctggcgt ctctttcttg 72180 tetetegggg ttgtgegggg tgagggcatg ggggtttgtg aaatgtette gtgattttgt 72240 aattcaggct agggagtcat tcggagaaaa gcgaatgaaa agtagggtaa aggggaaaga 72300 ggggctttgt gacttaggtg ggctttgcag aaggacagga agccacaccc cgagccttac 72360 aaggcaagct ggatggggt gcccggctgc aatggggatg gaccgataca gaccgctcag 72420 tgtagccacc tgctggacac atggagtcat agcgttctgc ttccttcatg cttcctaccc 72480 tecagetgeg cetgetette tttetteett ettteteete etteegeeta gtteegeece 72540 ggcccgcata cctgctttcc ctcttccctc aggtgtgact acccagatgc atctgtcttg 72600 gcccagggct ggggactctg aatttcctcc tttggtgatg actgaaaggg agcagctatc 72660 cctggttgag gccagagaga aggcttttca tctccatgtt cagtctctcc accttctcgc 72720 ttggcttgct gggatcctgc gcttggctgc gattagaggc cactgaattt attgtccaaa 72780 ctgggatgct tctgagagtg aagggtgtgt gtgcttgcta ttagtaatta tgcagagaca 72840 acagetgtag accagaattg teeegggeea geggggaete atggtaagea tagtteegag 72900 ggtccgccgg ccttttcggc cgtgcgtcag gtgtggaagg ctaaggcggc cagcagaggc 72960 tgctgcggca cttgttatgt gcctcactat ctaaaaagct ccttttgcca tgctgggact 73020 gtggtgggtg aagttggttg tcgtacaggg ctaaggtccc ctgagtagtg attgtaccag 73080 atttgctcac ctgggcctgg cgcacaatgg gataagaaag ccgcctgctt cctctagtct 73140 gggtgggaga cacagcccaa agtcccaggg cctaccttct cagaaactcc ccatcatcct 73200 ggattggact gtgcctttcc tgaattctga cacttcttgt tcctgcccct tcaggcaaag 73260 actgggcaag cagtttccta gcactgccag ctctgaggct ggtgcctttc tgggtggatt 73320 attggccttc ctggatacat tggcaggagg actcatgggt cggccccagg atgccctggc 73380 cagaggggac ccaaggaatg cctgacagtt tctctgcctg acttgcaggg gggaattcag 73440 accagoottg gagtootgtg aaggggaagg gotootggaa tottotagoo otoottooto 73500 teacceagtt ctaactetgg cagaaagace teattteete tteeceatgt gggagaettt 73560 ccctccttg acccctcttg cagttgggag accttgatcc ttgtgggagg aaggggttgc 73620 tgtaccagga tggggtccct ccgctccct ggccagggga agcatgacct gctgagctgg 73680



77160 gtocccacco agaggoagot gotgotgtot gtatgaaaga ogatgaactg cagocatcag gtgtggctca agagtcacgg gaagaggaga gagctttgtc atgagtcaga aaaggcagga 77220 77280 tgcagcatct cagtgactgt gagggtgacc gagggggggt cttgggtgac acctgggttt 77340 ctggcatgga gcaatgctct tctttgagaa gagggatcta gggaagaagg agagatgatg atggtgttgc tttgggaatc ctgggaatga ccaccctggg tttagttgcc tgggacggag 77400 tgggaattga atatetgeta ttgaatattt gatattgaac atgetgaatt tggegettea 77460 tetgeettge etgttttatt teteactetg accataceta gatettttga aaggaggett 77520 gaccctatcc tgaagcttga ccctgacctt ctacctttca acattttggt tagcgggcgc 77580 ctgcttgcgg actttctgag atgcacttct cagttattca gctgtgtcta cattcattcc 77640 cacaggetet gggcaggttg gaagaaccca catttgacce tatggcattg gacttgggtt 77700 gttgctacct ctattctgtg ccatggggaa gaaggctctt ctctgctgag tcctaacagg 77760 cagatactgg ctgtaaatcc tttctagacc cctccccggt gcccacgctc tgaggctact 77820 77880 cggagggcgg tgtgttgttg ctgagacccc tgaatcgcac tacttcaggc tgtcccctca cctcgggggt ggagataagg cctggggtct gagtttgagg ggactgacgc caggcagggc 77940 tectageagt aaggtggaac tgetteete eteagagega etttetaaac eagetteeca 78000 tteetetgag getgeegeea eeeetgggaa geacaeattt gtggttgeeg aacagttgaa 78060 gggcagtggc tctttcttcc agggcagtgt gggcctgcct ctggctcccc cgggagggct 78120 gcacccccac ccacctgtgc ccctcattaa gagtaagcag cccagagtgc agcacttggt 78180 gggacccatg aagaccccac caggagtccc tagtggtccc cagtgtctcc attatgccct 78240 ctgcagttct cacagtgccc taggaaagtc catgtgcttt tgctctccag agagctcctg 78300 gtcactttct aatatgtctc cagcaactca gcattatcag tattgcccca atatctcttt 78360 gatggaatcc ctatcaggct actggcattc atagctactt cccacagaat cccaggaaca 78420 ctccagtaat tcccagtgag ctcccagtag tgccaggttg ctcccatacc tcacagtggg 78480 cttctagtga tatcacattg tgtacccagg agcacctggt gttcccccaa gaacgttcca 78540 gcatgttccc aagaatgctc caacacatgg catcaacatt ccactattcc tgcaagattt 78600 ccagtagatg ccattacttc tcaagttatc tccaccaatg ccactgatgt gcttagagga 78660 gaatctgctg tectgeceae caggaatgaa gagaggttet ttgeetaete etectgeaag 78720 acacctgggc tttcctgctt tgggaggctg gtagggaagg caaaggagtg ggaataacat 78780 ttgttgagtg atagccgtgg cttaggcatt tatttgtgca ataaactgca aggtgggtgg 78840 78900 tatccctatt ttatagactc agaaactgtt acccagagag tggagtaatt ttttccaaa ggcagtaagt ggcagggagt gatcagaagg gcagctctgt caggtctgac atccctgctt 78960 gtccggagcc tgcagagacc cagagaaggc aaatcccagg gccagagatg cacagggtag 79020 gggcggggga gggtgggcag cgggctctag gctccttcct tccctcccta ctttgttttc 79080 79140 tcctttggat tgcaggcgta ttcattcctg agaaagaaag gaaaggggtt aggactggtt gagetgteet ggtttetttg gagagaaget gtggtteeeg gaacgtettg getetetggg 79200 gactgcaggg gtcagatcca tcccctccag tttcacatgc ctactcagct tccacattcc 79260 acatccagtg gctcaccaga cccacccacc ggcccagatg acccagttcc agggccggcc 79320 79380 tcagggttct gggctccctc ctgggcctgc cctcagccct gggcacaacc tcaaactcca ggtcctgggt tgtacatccg cctttctgcc cctttcccac actcgctgct gctctcccac 79440 tggctgcctt ccctggcatg ggtgaccttg ctagtgccag gggactctga acagcgctga 79500 79560 ctcagcaggt ggggcgatgg agccactctg caggtgggga aacaggggag caaggctggt tettteettt eeetgaeeeg geggggteee tttgeeettg ggagtgtgga eggaagggea 79620 gggagctgga cagggaggat gaggtccagc gccctgggtg agggccctgg tcggggagac 79680 79740 ggtgcccggt ggcttggcct ccctagcaag gactctgccc cttgttcctc agcctgtcag 79800 ggagaagagg aagggctctc tctggtgctg tgtcgagcag cagcctccca cacggagtgg ggaggggaaa gttgaaacgc accttgactc ctgaccatct cctccccacc ctcaccccca 79860 ccccaccac ggcagacatt gttggaaggc atattaatgg aggggttagg cagtttggag 79920 acagactgcc taggttcatg tccttctcta tctcattctt ggacatatca cttagggtct 79980 ctgaaccctg atttctccat ttataaaatg tggctaataa tgttacttac ctgtcacatg 80040 gtaaatgctc aattgaaaag gctaacatga gaatgccatt ttctgttatg tacatgatgc 80100 ttcatacaat cacactggcg cacatatgcg attatgtgtg ggctttctgt gcgctctgcc 80160 cttccccagc tttgctgtct gtccttgttg cttccagaag gttgagaggg aggtgagggg 80220 tetgeteetg acaatgetga etaetgaggg getgagtget geecaggaaa gtaggtagea 80280 gaggagagaa gacttggcct aagcgaggga gccagggcct tacagaggaa aggaaaaggg 80340 ggcaggggga aggaggacag ggagggtggc tgggtatggc aggagtcagg gcatctcaga 80400 ggcatgaagg agctggggt gctgccttcc tactcgggct cacccgtcca gcccccacac 80460 tgccctccac accagacacc cagcagtgct gctaaggcca ctggccaggg ggtgtgggcc 80520



ggc Gly	ttg Leu	cgg Arg	cag Gln	caa Gln	ctg Leu	Lys	ccc Pro	tac Tyr	acg Thr	atg Met.	gat Asp 135	ctg Leu	atg Met	gag Glu	cag Gln	437
Val	125 gcc Ala	ctg Leu	cgc Arg	gtg Val	cag Gln 145	130 gag Glu	ctg Leu	cag Gln	gag Glu	cag Gln 150	ttg	cgc Arg	gtg Val	gtg Val	ggg Gly 155	485
140 gaa Glu	gac Asp	acc Thr	aag Lys	gcc Ala 160	caq	ttg Leu	ctg Leu	ggg Gly	ggc Gly 165	gtg	gac Asp	gag Glu	gct Ala	tgg Trp 170	gct Ala	533
Leu	ctg Leu	Gln	Gly 175	ctg Leu	Gln	Ser	Arg	Val 180	Val	His	His	Thr	185	Arg	rne	581
Lys	gag Glu	Leu 190	ttc Phe	His	Pro	Tyr	Ala 195	Glu	Ser	Leu	Val	Ser 200	GTÀ	TIE	GIÀ	629
Arg	cac His 205	gtg Val	Gln	Glu	Leu	His 210	Arg	Ser	Val	Ala	215	His	Ата	Pro	Ala	677
Ser	ccc Pro	Ala	Arg	Leu	Ser 225	Arg	Cys	Val	Gln	Val 230	Leu	Ser	Arg	гÀг	235	725
acg Thr	Leu	Lys	Ala	Lys 240	Ala	Leu	His	Ala	Arg 245	lle	GIn	GIN	Asn	250	gac Asp	773
Gln	Leu	Arg	Glu 255	Glu	Leu	Ser	Arg	Ala 260	Phe	Ala	Gly	Thr	265	Thr	gag Glu	821
Glu	Gly	Ala 270	ggc Gly	ccg Pro	Asp	Pro	Gln 275	Met	Leu	Ser	Glu	. GLu 280	. Val	Arg	cag Gln	869
Arg	Leu 285	Glr	n Ala	Phe	Arg	Gln 290	Asp	Thr	Tyr	Leu	295 295	i lie	. Ala	Ala	ttc Phe	917
Thr	Arg	Ala	a Ile	Asp	Gln 305	Glu	Thr	Glu	ı Glu	ı Val 310	. Glr)	ı Gir	ı Gir	тес	g gcg 1 Ala 315	965
Pro	Pro	Pro	o Pro	Gl ₃ 320	/ His	Ser	Ala	. Phe	Ala 325	a Pro) GI	ı Phe	e Gir	330		1013
Asp	Ser	Gl	y Lys 335	s Val	L Leu	ı Ser	: Гуз	ь Let 34(ı Gir)	1 A16	a Ar	у те	345	o war	c ctg c Leu	1061
Tr	o Glu	a Asj 35	p Ile O	e Thi	r His	s Sei	: Lei 355	ı His 5	s Asp	o Gli	n Gl	y His 360	s Sei)	r Hls	ctg E Leu	1109
Gl:	g gad y Asp 365	p Pr	0 *													1161
gg cc cc ga	gtgga agcct tccca ggga cctg	aagg teet agtg gagg	gega ctc cac	tgtg actc attt catg acat	cag occ a ggg a cat o	gacaq aatci aatgo gtggo	gggad tggad ctcad gtgad tttq	gg co tg co tg a tt a gc t	cacca atta gtta tctg ctag	aaag catt ctcc caag tcac	g gg c ac a tt c ct t tc	ctgc cagg caag gttt tggc	tgtc cttt ggtg gccg tgcc	gca agg tga tgg	gggtgga tgcatat aacccag gagtagg tgctgga tggccac	1221 1281 1341 1401 1461 1521 1581
aα	aaaa.	ataq	aad	aaaa	aaa	gaga	atat	ca t	gggg	agaa	c at	gtga	tggt	gtg	agctatc tgaatat gggcaga	1641 1701

gecea gaget etgge	+		aaat	ctac	י ממי	aacai	ract	atat	acti	יטונ	CCCai		Ja y		gtgg ccct ata
<210 <211 <212 <213	> 360 > PR'		apier	ns											
	> 3 Ala	Ser N		Ala . 5	Ala	Val	Leu	Thr	Trp . 10	Ala	Leu	Ala	Leu	Leu 15	Ser
		Ser A	Ala :	Thr				25					30		
		Ser (Gly A				4()					40			
	Ala	Arg (55					00				
~ F	Asn	Met 2			70					15					0.0
Glu		Pro .		25					90					23	
		Glu	100					105					110		
		His 115					120					123			
	130	Pro				135					140				
1 4 5		Leu			150					TDD					100
		Leu		165					1/0					1/3	
		Arg	1 2 0					185					130		
		Ala 195					200					203			
	210	Arg				215					220				
225		Cys			230					230					240 Glu
		Arg		245					250					233	
			260					265					210		Phe
		275					280	l				20-)		e Asp
	290)				295	5				300)			Gly
301	ξ				310)				31;)				320 Val
				325	ń				330)			ı Asp	o Ile	Thr
		Leu	340)				345)				550	,	
11.1.	5 501	355		1			360)				36	5		

```
<210> 4
<211> 5381
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> 1..918
                       region
<223> 5'regulatory
<220>
<221> exon
<222> 919..930
<223> exon 1
<220>
<221> exon
<222> 1442..1498
<223> exon 2
<220>
<221> exon
<222> 1613..1724
<223> exon 3
<220>
<221> exon
<222> 2243..3940
<223> exon 4
<220>
<221> misc_feature
<222> 3941..5381
                      region
<223> 3'regulatory
<220>
<221> allele
<222> 319
<223> 17-42-319 : polymorphic base C or T
 <220>
 <221> allele
 <222> 3213
 <223> 17-41-250 : polymorphic base C or T
 <220>
 <221> conflict
 <222> 1241
 <223> 17-39-343 : T in ref genbank AC007707
 <220>
 <221> conflict
 <222> 1447
 <223> 17-40-202 : G in ref genbank AC007707
 <220>
 <221> primer_bind
```

```
<222> 1..11022
<223> 17-42.pu
<220>
<221> primer_bind
<222> 553..11575
                  complement
<223> 17-42.rp
<220>
<221> primer_bind
<222> 899..11920
<223> 17-39.pu
<220>
<221> primer bind
<222> 1246..12267
<223> 17-40.pu
<220>
<221> primer bind
<222> 1441..12461
<223> 17-39.rp
                   complement
<220>
<221> primer_bind
<222> 1632..12651
<223> 17-40.rp
                   complement
<220>
<221> primer_bind
 <222> 2964.. 13984
 <223> 17-41.pu
 <220>
 <221> primer_bind
 <222> 3432..14454
                  complement
 <223> 17-41.rp
 <220>
 <221> primer_bind
 <222> 300..318
 <223> 17-42-319.mis
 <220>
 <221> primer bind
 <222> 320..338
                          complement
 <223> 17-42-319.mis
 <220>
 <221> primer_bind
 <222> 3194..3212
 <223> 17-41-250.mis
 <220>
 <221> primer_bind
 <222> 3214..3232
                          complement
 <223> 17-41-250.mis
```

<220> <221> misc binding <222> 307..331 <223> 17-42-319.probe <220> <221> misc_binding <222> 3201..3225 <223> 17-41-250.probe <400> 4 60 cagcagatga gactggaaat gagtcaggat gagccacagt ggaggatgaa ttaaatgggc 120 aggagtgtgg tagaaagacc tgttggaggc tatgaatgca atcaaggtga cagacaactg gtgcaatgat ggtagtggaa atggaggaga ggggattgat tcaagatgca tttaggacca 180 agaatcggga gcttgtgaac gtgtgtatga gtactgtaga cggagtgggt gtgtcatcag 240 agaagatctg agcatttggg cttgctctcc tcagaggccc tgcgagtgga gttcagcttt 300 360 tectcatggg gcaaatetya etttegetee agtteetggg geteagagte eetggeeeag atgectettg ceateteate tteaceetge etggetteee ttgettgtte eaggattgtt 420 tcataaagag ggatgtggtt ggtctttaac cctatgaatg ctggctgagg atgcctgcgg 480 aacctgtagt gaagctttca ggggctgctc gggttctggc tggtaggtga acactgtcca 540 tettgccggc tgggacacag tgactctggg tagttgtgta agagaggggc cettggcaga 600 caaacaggtt cttctctgtt ggtgggccag ccagcaggtc agtgggaagg ttaaaggtca 660 tggggtttgg gagaaactgg gtgaggagtt cagccccatc ccccgtaaag ctcctgggaa 720 gcacttetet actggggcag cccctgatac cagggcacte attaaccete tgggtgccag 780 ggaaagggca ggaggtgagt gctgggaggc agctgaggtc aacttcttt gaacttccac 840 900 gtggtattta ctcagagcaa ttggtgccag aggctcaggg ccctggagta taaagcagaa tgtctgctct ctgtgcccag acgtgagcag gtgagcagct ggggcagagg gatgggggtc 960 acagtoctaa gggagggcat tgcaggtggc ctcaggggag agcctggggt ggcccctaag 1020 1080 acgtcctctt ggaacatttt ggcagagttg cctcttcgcc ctcattatgg ctcagttttt ccaccatgaa atgggaggga gggagacagg tgggcagggg agaggtggta gaagtggcct 1140 1200 agagaactgt tcctggggtc tgggaccttt gcgaaggggt tagagcacca cgctccctgc 1260 tatgtgactg aggtagcaag agcacgccct cttcccatgt ctgaggaaga caccctagcc 1320 teettgaete acctaggtea gteetettga geeccaaeag etetgtgete eecageecaa 1380 ggaaggggta acaggatttc gggcagttgc ccctgcagag gccccctggg caagtcccct 1440 gegecatgte cettegtete ettetteece taaccaggee teeeteeace tgtettetea 1500 gagcagataa tggcaagcat ggctgccgtg ctcacctggg ctctggctct tctttcaggt 1560 gggtctccga ccctgacttc aacgtggggg tgtgggtgga ggctggccag agggccctgt 1620 ccaccctggg ggaggagagc ccaggccctg attacctagt ccctctccac agcgttttcg gccacccagg cacggaaagg cttctgggac tacttcagcc agaccagcgg ggacaaaggc 1680 1740 agggtggagc agatecatca geagaagatg getegegage eegegtgagt geeeagggga 1800 aggggtgtag gcgaagggag gagacagctg ggccatgcca tgatgacctg cctctgctgc 1860 ctcaacctct gtggccgctg ctgggacaga ggaaaggagc ggtgctagct ctgtctgcag 1920 atcccggcca tcctgggctc tttagcgccc tctgcctgca gcccccgcct tgacaactcc 1980 gtagctgttg cccccttgct cactgaggcg cgggacctgg gatcaatcgg gaggacgccc 2040 gctgcagtcc ccagaatcaa aggatgatgt ggcgcatcta tgtttctttg gagagtgttg taggtctgga tttgtatggg caatgtgttt gtgcttcgtg cgtgagttgt tactggccag 2100 ggctaggaca agageceteg accetgggge caacgeeetg egteettggt teeeceagag 2160 gatcagtgcg cgatgacttg gggacaaagg agatgatggg ggctagcagt ctgacggcct 2220 ggatatetgt eccettetee aggaceetga aagacageet tgagcaagae etcaacaata 2280 tgaacaagtt cctggaaaag ctgaggcctc tgagtgggag cgaggctcct cggctcccac 2340 aggacccggt gggcatgcgg cggcagctgc aggaggagtt ggaggaggtg aaggctcgcc 2400 2460 tccagcccta catggcagag gcgcacgagc tggtgggctg gaatttggag ggcttgcggc agcaactgaa gccctacacg atggatctga tggagcaggt ggccctgcgc gtgcaggagc 2520 tgcaggagca gttgcgcgtg gtgggggaag acaccaaggc ccagttgctg gggggcgtgg 2580 2640 acgaggettg ggetttgetg cagggactge agageegegt ggtgeaceae aeeggeeget 2700 tcaaagagct cttccaccca tacgccgaga gcctggtgag cggcatcggg cgccacgtgc

```
aggagetgea eegeagtgtg geteegeacg eeceegeag eecegegege eteagteget
                                                                     2760
gcgtgcaggt gctctcccgg aagctcacgc tcaaggccaa ggccctgcac gcacgcatcc
                                                                     2820
agcagaacct ggaccagctg cgcgaagagc tcagcagagc ctttgcaggc actgggactg
                                                                     2880
aggaaggggc cggcccggac ccccagatgc tctccgagga ggtgcgccag cgacttcagg
                                                                     2940
ctttccgcca ggacacctac ctgcagatag ctgccttcac tcgcgccatc gaccaggaga
                                                                     3000
                                                                     3060
ctgaggaggt ccagcagcag ctggcgccac ctccaccagg ccacagtgcc ttcgcccag
agtttcaaca aacagacagt ggcaaggttc tgagcaagct gcaggcccgt ctggatgacc
                                                                     3120
tgtgggaaga catcactcac agccttcatg accagggcca cagccatctg ggggacccct
                                                                     3180
gaggatetae etgeecagge ceatteceag etyettgtet ggggageett ggetetgage
                                                                     3240
ctctagcatg gttcagtcct tgaaagtggc ctgttgggtg gagggtggaa ggtcctgtgc
                                                                     3300
aggacaggga ggccaccaaa ggggctgctg tctcctgcat atccagcctc ctgcgactcc
                                                                     3360
ccaatctgga tgcattacat tcaccagget ttgcaaaccc agcctcccag tgctcatttg
                                                                     3420
ggaatgctca tgagttactc cattcaaggg tgagggagta gggagggaga ggcaccatgc
                                                                     3480
atgtgggtga ttatctgcaa gcctgtttgc cgtgatgctg gaagcctgtg ccactacatc
                                                                     3540
                                                                     3600
ctggagtttg gctctagtca cttctggctg cctggtggcc actgctacag ctggtccaca
                                                                     3660
gagaggagca cttgtctccc cagggctgcc atggcagcta tcaggggaat agaagggaga
aagagaatat catggggaga acatgtgatg gtgtgtgaat atccctgctg gctctgatgc
                                                                     3720
tggtgggtac gaaaggtgtg ggctgtgata ggagagggca gagcccatgt ttcctgacat
                                                                     3780
                                                                     3840
agetetacae etaaataagg gaetgaacee teccaactgt gggageteet taaaceetet
ggggagcata ctgtgtgctc tccccatctc cagcccctcc ctctgggttc ccaagttgaa
                                                                     3900
gcctagactt ctggctcaaa tgaaatagat gtttatgata gaagtttgcc tggcgtgact
                                                                     3960
                                                                     4020
ctcatttgga ccatgtctga aagcagtggc ctcaccacta tccccaaagc acacccatca
cccactccat teeettgetg etetttetea teeacceaet eccagtecag gtetgteaaa
                                                                     4080
gggggtctgg ctgggctctg cttcagggat cctggctaga caacggctgt ctgtcacacc
                                                                     4140
tggcaggagg gcctgggtta cgggcccttc ctctgcacct gcactgttca ctagcctgct
                                                                     4200
                                                                     4260
ccccacagg acactgtgca tggaatgcag gctgtgtctg gaagagctgt ggccctggtg
gacctaagat teetgaggtg ggetgeetee tttgtteetg etgttetaga gtttgaatgg
                                                                     4320
cetettttta tgeeggacte tettetgggg acteceetea eteaggggea ecaatgetee
                                                                     4380
ctatagatcc cctgggaact gaaactgggg tgtggtggag gacgtggaaa gggtaaacac
                                                                     4440
ageteettgt etttggaett eeetgteegg eeeeetttee teeeagetea geetaetgte
                                                                     4500
                                                                     4560
cccgggttct cagcacctgc ctgctcccca accccatagc acagacccca cacatatgta
 ggctcatcat gcctgcaggc tggtcttccc tgacaccgtg gattttgaca atgttggcaa
                                                                      4620
cagaactggg ttgtggaccc agcacctgga gagaggaagt gctagaaagg tagaaataat
                                                                      4680
 aaaaggtgtt tttgttgttg ttaggaaact ggaaaagcat aggtcaaggg ctatgatggg
                                                                      4740
 gatgaggagg taggagtgaa aatgagggct gtgtacttga ggctgggatt ggggaaggta
                                                                      4800
 gtgatgagga cagaataggg agtgggaaga acagaaaggg acagagggat tcagggattg
                                                                      4860
 tgagagaggg gaagaggctg agccacccgg aggggcgacc tagcacgcaa gcagtatgtg
                                                                      4920
                                                                      4980
 gcccaacact ggaaccaagc agcccggctc cgggcgcacc ttctcaggga ttcctcaggg
 acaagtccag cccttgtcg tcaaggctct tgtagaccga cgtagggacc aatagaaccc
                                                                      5040
 cgtgcggtgg agctattgtg aaggagcaaa aaagtgccct ggttctaaga ggacgtctta
                                                                      5100
 ggggaagtga cggctgagtt gaggtggatc cggctggcga tgtaaggttc gagccatata
                                                                      5160
                                                                      5220
 aacccgggaa ccgggagccc ttgacgacat tgttccccga gtgcccggag tctgcggctt
 tttttggggt ggtggcagct ggcggaagtg acgggagagg ggtggggccg cgagagcggc
                                                                      5280
 ggaagtagga agccgaggtc tgaattgcgc gtggtggcca tggcggccag cggggctgtg
                                                                      5340
                                                                      5381
 gaaccagggc ccccgggggc tgccgtcgcc ccgtcgcccg c
 <210> 5
 <211> 18
 <212> DNA
 <213> Artificial Sequence
 <223> sequencing oligonucleotide PrimerPU
 <400> 5
                                                                        18
 tgtaaaacga cggccagt
```





- <210> 6 <211> 18 <212> DNA
- <213> Artificial Sequence
- <220>
- <223> sequencing oligonucleotide PrimerRP
- <400> 6
- caggaaacag ctatgacc

18